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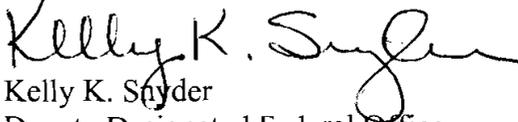
Dave Hermann, Chair  
Community Advisory Board  
for Nevada Test Site Programs  
232 Energy Way  
N. Las Vegas, NV 89030

RESPONSE TO ENVIRONMENTAL MANAGEMENT (EM) PUBLIC INVOLVEMENT  
REVIEW EFFORT (EMPIRE) COMMITTEE COMMENT RESOLUTION REQUEST FOR  
REMAINING EM FACT SHEETS

In a letter dated March 5, 2008, I committed to the Community Advisory Board for Nevada Test Site Programs to provide a comment resolution on each recommendation that the Board made regarding the remaining EM fact sheets. Enclosed are the comment resolutions for the following fact sheets/brochures:

- Radioactive Waste Acceptance Program at the Nevada Test Site
- Mixed Low-Level Waste at the Nevada Test Site
- Mixed Low-Level Waste Acceptance Guidelines at the Nevada Test Site
- Soils Project...An Approach to Cleanup Fact Sheet
- Groundwater at the Nevada Test Site Fact Sheet
- Underground Test Area Questions and Answers
- Industrial Sites...An Approach to Cleanup Fact Sheet
- Industrial Sites...A Success Story Fact Sheet
- Tonopah Test Range Fact Sheet

I would like to thank the EMPIRE committee for their diligence in reviewing the EM fact sheets. If you have questions or concerns please contact me at (702) 295-2836.

  
Kelly K. Snyder  
Deputy Designated Federal Officer  
Public Involvement Task Manager

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cc w/encl. via e-mail:  
M. A. Nielson, DOE/HQ (EM- 13) FORS  
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CAB Members and Liaisons  
Rosemary Rehfeldt, NREI, Las Vegas, NV

## Radioactive Waste Acceptance Program...at the Nevada Test Site

CAB Comment	Comment Resolution
Under Overview - Make two sentences out of the first paragraph and add the word “nationwide,” to read, “ <i>The Radioactive Waste Acceptance Program ensures safe waste disposal operations at the Nevada Test Site (NTS). The NTS is one of the nation’s approved sites for the disposal of low-level and mixed low-level radioactive waste resulting from cleanup of the nationwide nuclear weapons complex.</i> ”	Partially accepted. New text - The Nevada Test Site (NTS) is one of the U.S. Department of Energy (DOE) sites designated for the disposal of low-level and mixed low-level waste generated by the cleanup of the nationwide nuclear weapons complex. The DOE National Nuclear Security Administration Nevada Site Office Radioactive Waste Acceptance Program (RWAP) ensures that the low-level and mixed low-level waste disposed at the NTS meets or exceeds the stringent NTS Waste Acceptance Criteria which includes requirements set forth by the U.S. Department of Transportation, the Resource Conservation and Recovery Act (RCRA), and other federal, state and local laws and regulations.
Under Overview - Move the last sentence from the fourth paragraph to become the last sentence of the second paragraph, which reads, “ <i>In addition, waste containers must be labeled and shipped according to U.S. Department of Transportation regulations.</i> ”	Partially accepted. Text included as recommended but not in the exact location.
Under Overview - Cross-reference the <i>Radioactive Waste Acceptance Program brochure</i> within this Fact Sheet.	Rejected. Comment did not pertain to fact sheet.
Under Waste Acceptance Process - The first sentence should read, “ <i>The Nevada Test Site waste acceptance process begins when a generator submits its waste acceptance documentation, which consists of the following essential information:</i> ”	Partially accepted. New text - The road to waste disposal at the NTS begins when a DOE or U.S. Department of Defense site engaged in cleanup activities proposes a specific waste stream for disposal at the NTS. If initial discussions with the Nevada Site Office indicate that the proposed waste stream may meet NTS Waste Acceptance Criteria, then the waste generator undergoes a rigorous evaluation conducted by RWAP staff to ensure that an NTS-compliant Quality Assurance Program is in place at the waste generator’s site. During this evaluation, RWAP auditors complete a thorough on-site examination of a waste generator’s facility and procedures through all stages of waste management, including generation, characterization, packaging, and shipment. If issues are identified during the audit, corrections must be made prior to NTS approval for waste shipment and disposal.
Under Waste Acceptance Process - In the second bullet, the acronym “DOE” is to be added to the second sentence, so it would begin as “ <i>A DOE Waste Certification Official...</i> ”	Partially accepted. New text - In addition to the waste profile, the generator must also submit a written list which identifies key personnel who certify that the waste meets the NTS Waste Acceptance Criteria and is safely packaged, marked, and labeled in accordance with U.S. Department of Transportation regulations.

Under Waste Acceptance Process - Also within the second bullet, explain what “an independent quality assurance organization” means.	Text removed from fact sheet.
Under Waste Acceptance Process - In the third bullet, the first sentence reads, “A list of qualified personnel that certify low-level and mixed low-level radioactive waste is also provided to Nevada Test Site Personnel.” The Committee recommends adding who the “qualified personnel” are and how they are qualified, as well as how this information is provided to NTS personnel.	Accepted.
In the next paragraph, the Committee recommends that the term “waste stream” be defined.	Accepted.
In the last sentence of the next paragraph, change the word “can” to “will.”	Accepted.
In the next paragraph, specify the types of trailers used.	Partially accepted. Incorporated into caption.
In the final paragraph, under What this Means for the Complex... Change the paragraph to read, “The Nevada Site Office’s commitment to safe disposal operations ensures that sites across the U.S. Department of Energy complex ship low-level and mixed low-level waste following the stringent waste management guidelines that have been established. The Radioactive Waste Acceptance Program provides the necessary framework for safe, successful waste shipments and disposal activities necessary to realize cleanup goals.”	Partially accepted. New text - The Nevada Site Office, with the support of DOE Headquarters, is committed to safe disposal operations at the NTS. Numerous regulations and procedures have been implemented to ensure that waste generator sites across the DOE Complex ship low-level and mixed low-level radioactive waste in accordance with stringent waste management guidelines. RWAP provides the necessary framework for safe, successful waste shipments and disposal activities necessary to realize cleanup goals.

**Mixed Low-Level Waste at the Nevada Test Site - and –  
Mixed Low-Level Waste Acceptance Guidelines at the Nevada Test Site**

<b>CAB Comment</b>	<b>Comment Resolution</b>
Combine the two fact sheets	Accepted.
<i>Mixed Low-Level Waste at the Nevada Test Site</i>	
Under Mixed Low-Level Waste Composition: Take the first sentence of the second paragraph and move up to become the second sentence of the first paragraph, which reads: “hazardous wastes are materials that are toxic, corrosive, reactive, ignitable, or are specifically identified by the U.S. Environmental Protection Agency (EPA) as “hazardous.”	Partially accepted. New text – Mixed low-level waste is a “mix” of both low-level radioactive waste and hazardous waste. These wastes are considered hazardous because they are toxic, corrosive, reactive, ignitable, or specifically identified by the U.S. Environmental Protection Agency (EPA) as “hazardous.”
Change the last sentence in the first paragraph to read, “Because of its hazardous non-radioactive component, mixed-low-level waste is managed separately from low-level waste.	Partially accepted. New text - Mixed low-level waste is managed separately from low-level waste because of the hazardous waste component.
Under Disposal at the Nevada Test Site: On the second page, first paragraph, take “and” out of the last sentence and add “and x-ray,” to read: “Compliance is ensured through extensive document review and x-ray verification of a	Partially accepted. New text - All waste disposed at the Nevada Test Site adheres to the Nevada Test Site Waste Acceptance Criteria and extensive document review. Compliance is also determined by X-ray scanning of 5% or

<i>minimum of five percent of all mixed low-level waste disposed.”</i>	more of all the mixed low-level waste disposed.
Under Summary - Write the first sentence in present tense and add the word “remediation,” to read, “Mixed low-level waste is managed at the Nevada Test Site in support of environmental management remediation and other activities.”	Partially accepted. Mixed low-level waste is managed at the Nevada Test Site to support environmental restoration and other activities.
<i>Mixed Low-Level Waste Acceptance Guidelines at the Nevada Test Site,” verbiage should be inserted into the first Fact Sheet as follows:</i>	
On page 1, Mixed Low-Level Waste Composition should read as follows: Mixed low-level waste is a “mix” of low-level, radioactive materials and hazardous constituents. These constituents are toxic, corrosive, reactive, ignitable, or are specifically identified by the U.S. Environmental Protection Agency (EPA) as “hazardous.” The low-level portion of mixed waste contains small amounts of radioactive material and can generally be handled without personal protective equipment. Mixed low-level waste is managed separately from low-level waste because of its non-radioactive, hazardous component. Examples of waste forms that <i>will not be accepted</i> are free liquids, biodegradable sorbents, and etiologic and chelating agents. The EPA regulates generation, transportation, treatment, storage, and disposal of hazardous waste (often referred to as “cradle-to-grave” management) as set forth in the <i>Resource Conservation and Recovery Act (RCRA)</i> . In Nevada, the EPA has delegated authority to the State of Nevada to ensure compliance with RCRA.	Partially accepted. New text - Mixed low-level waste is a “mix” of both low-level radioactive waste and hazardous waste. These wastes are considered hazardous because they are toxic, corrosive, reactive, ignitable, or specifically identified by the U.S. Environmental Protection Agency (EPA) as “hazardous.” The low-level portion of mixed waste contains small amounts of radioactive material and can generally be handled without personal protective equipment. Mixed low-level waste is managed separately from low-level waste because of the hazardous waste component.  The EPA regulates generation, transportation, treatment, storage, and disposal of hazardous waste as directed in the Resource Conservation and Recovery Act (RCRA). In Nevada, the EPA delegated regulatory authority to the State of Nevada to ensure compliance with RCRA.
On page 1, Disposal at the Nevada Test Site, the first sentence should read: The DOE National Nuclear Security Administration Nevada Site Office operates a Mixed Waste Disposal Unit under the Nevada Test Site Part B RCRA permit reissued by the State of Nevada Division of Environmental Protection (NDEP) in December 2005.	Accepted.
Page 2 should read: It is important to note that all mixed low-level waste disposed at the Nevada Test Site must comply with strict waste acceptance criteria which includes conformance to RCRA Land Disposal Restrictions. Compliance is ensured through extensive document review and verification of a minimum of five percent of all mixed low-level waste disposal. Any waste that does not meet the acceptance criteria after undergoing verification will not be accepted.	Partially accepted. New text - All mixed low-level waste disposed at the Nevada Test Site complies with strict waste acceptance criteria, including RCRA land disposal restrictions. All waste disposed at the Nevada Test Site adheres to the Nevada Test Site Waste Acceptance Criteria and extensive document review. Compliance is also determined by X-ray scanning of 5% or more of all the mixed low-level waste disposed. Any waste that does not meet all requirements is not accepted.
Verbiage should read: How does a generator get approval to dispose waste at the NTS? Each mixed low-level waste generator must complete a series of steps prior to the first waste shipment. A key element is the development of a waste certification program to comply with waste acceptance criteria. Once the program is approved, waste stream profiles can be submitted for review and approval on a waste stream-specific basis. The approval process includes a	Accepted.

comprehensive review of program documents, generator and treatment facility evaluations, (i.e., audits, surveillances, and program reviews) and waste verification.	
Verbiage should read: What are the packaging requirements? Typical U.S. Department of Transportation packaging to be accepted for disposal includes boxes measuring 4' x 4' x 7' or 4' x 2' x 7', 55-gallon drums, and cargo containers. Alternate packaging will be considered, but Nevada Test Site Disposal Operations personnel must be consulted prior to shipment to ensure the appropriate resources are available.	Partially accepted. Waste is shipped in 55-gallon drums, boxes measuring 4' x 4' x 7' or 4' x 2' x 7', large cargo containers, or other Nevada Test Site approved containers that are built to meet strict U.S. Department of Transportation safety requirements. This waste is disposed at the Nevada Test Site in its packaging container. Alternate packaging is considered, but Nevada Test Site Disposal Operations personnel are consulted prior to shipment to ensure the appropriate resources are available.
Verbiage should read: Storage of mixed low-level waste - In addition to disposal capabilities, a mixed low-level waste storage facility (for on-site generated waste only) is operated at the Nevada Test Site. Legacy and newly identified mixed low-level waste is managed at this facility prior to off-site treatment and/or disposal. The waste handled at this facility must be managed in accordance with strict treatment/disposal schedules established by the NDEP.	Partially accepted. New text - In addition to disposal capabilities, a mixed low-level waste storage facility (for on-site generated waste only) is operated at the Nevada Test Site. Legacy and newly generated mixed low-level waste is managed at this facility through disposal and, when necessary, off-site treatment. The waste handled at this facility is managed in accordance with strict treatment and disposal schedules established by the State of Nevada.
Verbiage should read: Summary - Mixed low-level waste is managed at the Nevada Test Site in support of environmental cleanup and other activities. In addition, the Nevada Site Office will continue to work diligently towards accelerating closure of the Nevada Test Site Mixed Waste Disposal Unit while meeting its objective to provide crucial disposal capability for other DOE sites throughout the United States engaged in accelerated cleanup. The priority of the Nevada Site Office is to conduct these and other activities while protecting the public, the workers, and the environment.	Partially accepted. New text - Mixed low-level waste is managed at the Nevada Test Site to support environmental restoration and other activities. The Nevada Site Office works diligently to accelerate closure of the Mixed Waste Disposal Unit while providing a crucial disposal capability for the Nevada Test Site and other DOE sites throughout the United States engaged in accelerated cleanup. The Nevada Site Office conducts these and other activities while protecting the public, the workers, and the environment.
Include pertinent photographs be included in the new fact sheet.	Accepted.
The black box with reverse type on page 2 of the <i>Acceptance Guidelines</i> fact sheet should be included in the new, combined fact sheet. The information in the box begins with: The Nevada Test Site plans to accept mixed low-level waste with the following EPA Hazardous Waste Numbers, etc.	Recommendation was not included due to spacing issues.

<b>Soils Sub-Project</b>	
<b>CAB Comment</b>	<b>Comment Resolution</b>
The first sentence in the first paragraph states that, " <i>The Nevada Test Site (NTS) and the Nevada Test and Training Range (NTTR) played important roles in the advancement of the nation's nuclear testing program.</i> " The CAB agrees	Accepted.

<p>that more information should be included in the fact sheet about the NTTR and the U.S. Department of Defense's (DOD's) role in the clean up decision process.</p>	
<p>In the second sentence of the first paragraph, TTR needs to be spelled out, so the sentence will read, <i>"The NTS is located 65 miles northwest of Las Vegas, and the NTTR (including the Tonopah Test Range [TTR]) surround the east, north, and west boundaries of the NTS, in south-central Nevada."</i></p>	<p>Accepted.</p>
<p>The third sentence in the first paragraph needs restructuring, so that it is clear that the Atomic Energy Commission was the predecessor agency to the U.S. Department of Energy (DOE), but that the DOE was also involved in testing, along with the DoD. The revised sentence should read, <i>"From 1951 through 1992, the sites were used by the U.S. Department of Energy (formerly the Atomic Energy Commission) and the U.S. Department of Defense (DoD) to conduct atmospheric and underground nuclear weapons tests, and chemical explosion tests of plutonium-bearing materials."</i></p>	<p>Partially accepted. New text - The Nevada Test Site and the Nevada Test and Training Range (formerly the Nellis Air Force Range) played important roles in the advancement of the nation's nuclear testing program. From 1951 through 1992, the sites were used by the U.S. Department of Energy (formerly the Atomic Energy Commission) and the U.S. Department of Defense to conduct atmospheric and underground nuclear weapons tests and chemical explosion tests of plutonium bearing materials.</p>
<p>The next section of the fact sheet, entitled "Background," is to be placed at the beginning of the fact sheet, before "History." The only change to this paragraph is in the last sentence, which will read, <i>"These soils contain many types of contaminants including radioactive materials, oils, solvents, gasoline, and heavy metals, particularly lead; as well as contaminated instruments and test structures used during testing activities."</i></p>	<p>Accepted.</p>
<p>The title, "History," should be removed, keeping the verbiage in that section to follow the "Background" section of the fact sheet.</p>	<p>Accepted.</p>
<p>It was decided by the committee that a "definition section" should be included within the fact sheet, which would define many of the terms used in the fact sheet verbiage.</p>	<p>Accepted.</p>
<p>The next section is entitled, "Restoration Efforts," and also has several changes. In the first sentence of this section, the term "closure in place" should be placed and defined in the definition section. Additionally, a sentence should be inserted after the first sentence which will read, <i>"These sites are designated as Corrective Action Sites."</i></p>	<p>Accepted.</p>
<p>In the next section, entitled "Path Forward," the last sentence used the term "land-use scenarios." This term should be placed and defined in the definition section. The next paragraph in this section uses the term "land withdrawal." This term should also be placed and defined in the definition section. The very last sentence in this section, which reads, <i>"For more information, contact the NSO using the information provided below,"</i> will be taken out.</p>	<p>Partially accepted. "Land-use scenarios" and "land withdrawal" sentences were removed from text. Therefore, no definition was needed.</p>

## Groundwater at the Nevada Test Site

CAB Comment	Comment Resolution
The committee agreed to create a “definition box” to define terms used throughout the fact sheet	Accepted.
On page 1, in the “Background” section, the second sentence should be changed, to read: <i>“About one-third of these tests occurred near, below, or in the water table, which resulted in some radioactive contamination of the area’s groundwater.”</i> The words “water table” within this sentence, should be placed in the definition box.	Accepted.
In the third sentence of the first paragraph, the word “with” should be replaced with “by.” The sentence will then read: <i>“The U.S. Department of Energy (DOE) began preliminary hydrologic research in the 1970s; but a more intensive groundwater studies program was launched in 1989 by the formation of the Underground Test Area Project (UGTA) at the DOE Nevada Site Office (NSO).”</i>	Accepted.
The first sentence of the second paragraph within the “Background” section should be changed to read: <i>“Faced with the reality that no proven, cost-effective method existed then, or now, for remediating deep, extensive groundwater contamination, the UGTA project team set out to develop an effective, long-term monitoring system.”</i> The third sentence in this paragraph should be changed, to read: <i>“Scientists are developing and refining computer models to effectively position future monitoring wells within the monitoring network.”</i>	Accepted.
The next section in the fact sheet is entitled “The UGTA Strategy.” An addition should be placed within the first sentence of the first paragraph in this section. The sentence will then read: <i>“The complex geology and hydrology of the Nevada Test Site presents unusual challenges in understanding speed, volume and direction of groundwater flow and the movement of contaminants.”</i> The second sentence in this paragraph should also be changed, to read: <i>“To meet these challenges, the UGTA project team embarked on an investigative process that incorporates various research components including drilling and sampling of wells, contaminant characterization, and computer model development.”</i>	Accepted.
It is suggested that the next paragraph be completely omitted and replaced with the following verbiage: <i>“With these components in mind, the team designed a phased approach – the objective of which is to establish a comprehensive monitoring network using both new and existing wells. The first phase of the strategy (already complete) consisted of a regional evaluation, which explored</i>	Partially accepted. New text - With these components in mind, the team designed a phased approach. The objective is to establish a comprehensive monitoring network using both new and existing wells. The first phase of the strategy (already complete) consists of a regional evaluation, which explored the groundwater pathways over the entire Nevada Test Site. The second phase

<i>the groundwater pathways over the entire NTS. The second phase (currently in progress) will help scientists determine contaminant movement and the boundaries that are unique to each of the underground test areas. Both of these phases incorporate various components, such as sampling, contaminant characterization, computer modeling, and process validation.”</i>	(currently in progress for some Corrective Action Units) will help scientists determine contaminant movement and the boundaries that are unique to each of the underground test areas. Both of these phases incorporate various components, such as sampling, contaminant characterization, computer modeling, and process validation.
In the first sentence of the third paragraph within “The UGTA Strategy” section, the year should be changed from 2022 to 2027. In the next sentence, the term “proof of concept” should be placed in the definition box. There is also a blue box that defines “contaminant boundary.” This definition should be placed with the other terms in the definition box.	Accepted.
On page 2, in the picture box entitled “What is a Computer Model?,” the first sentence should be changed, to read: “ <i>Over the past 15 years, scientists have used modeling technology to explain how groundwater systems behave.</i> ”	Partially accepted. New text - For more than 15 years, scientists have used computer modeling technology to understand how groundwater systems behave at the Nevada Test Site.
Continuing on page 2, within the fact sheet verbiage, there is a term in the first sentence of paragraph 1 that should be defined. That term is “close these areas.” There are several additional changes to this sentence, therefore, when changed it will read: “ <i>If the results are acceptable to both NSO and the State of Nevada, NSO will officially close these areas and establish a long-term monitoring program using existing wells and, if necessary, drilling new wells.</i> ”	Partially accepted. New text - If the results are acceptable to both the Nevada Site Office and the State of Nevada, the State will approve completion of UGTA characterization activities and the DOE will impose restricted access controls and implement a long-term monitoring program using existing wells and, if necessary, drilling new wells.
Place the term “modeling” in the definition box.	Partially accepted. Computer model was added to definition box.
The very last sentence underneath the “Public Involvement” section that begins with: “For more information...,” should be removed.	Accepted.

<b>Underground Test Area Questions and Answers</b>	
<b>CAB Comment</b>	<b>Comment Resolution</b>
The committee was informed, at their February 6, 2008 meeting, that the cover was going to be updated and redesigned. The committee likes the layout on the inside pages and would like to see it remain as is, including the boldface type for the questions. Additionally, all photos should have captions and some of the photos should be updated.	Accepted.
On page 1, in the second sentence of paragraph one, the word “tools” should be changed to “alternatives.” In the first sentence of paragraph two, the word “historic” should be removed. In the next sentence, remove the word “Project” and replace it with: “Technical Working Group (TWG).” The last sentence on this page should be changed, to read: “ <i>This brochure offers answers to these frequently asked questions:</i> ”	“Tools” and “historic” comments accepted. “TWG” comment rejected due to inaccuracy. New text - UGTA Sub-Project staff work cooperatively with the State of Nevada and the scientific community to find the most practical and technologically advanced ways to approach these challenges.

<p>Also on page 1, within the map, Pahrump and Oasis Valley should be added, and since Pahute Mesa is mentioned within the brochure, it should be shown on the map as well.</p>	
<p>On page 2, under the question “Is there an immediate risk to the public?” the first two sentences should be changed, to read: <i>“Based on currently available scientific information, there is no immediate risk to the public. The contamination associated with NNSA/NSO activities is thought to be confined to areas on the NTS where nuclear tests were conducted.”</i> After the last sentence in this paragraph, the following sentence should be inserted in parentheses before the period, <i>“(See DOE/NSO Groundwater fact sheet.)”</i> Also, the text box, with the sentence that begins, <i>“It is important to note that...”</i>, should be kept on this page.</p>	<p>Accepted recommendation related to immediate risk question. Rejected recommendation related to inserting information in parentheses. Partially accepted recommendation regarding “It is important to note...” Text was moved to different page within brochure.</p>
<p>The only change to page 3 is under the question, “Should contamination migrate off the NTS, where would it go?” In the first sentence, replace the words, <i>“The NNSA/NSO believes that”</i> with <i>“Modeling indicates that...”</i></p>	<p>Partially accepted. New text - Groundwater modeling indicates that if contamination did move beyond the boundaries of the Nevada Test Site, it would first occur in the area of Western Pahute Mesa, located in the northwest portion of the Nevada Test Site.</p>
<p>On page 4, under the question, “What background tritium levels have been found?” in the last sentence, remove the words <i>“As a means of comparison.”</i> Then place the sentence after the first sentence in this paragraph. Also on this page, removed the photo with the red cooler.</p>	<p>Accepted.</p>
<p>The second question on page 5 should be changed, to read, <i>“If contamination is found in the groundwater, what do the NNSA/NSO and the State of Nevada plan to do about it?”</i> Then in the last sentence of the answer to this question, the committee suggests removing the words, <i>“an investigation would begin into an alternative water supply”</i> and replace them with, <i>“and alternative water supplies would be provided.”</i> Also on this page, in the text box, remove the word <i>“radioactivity”</i> and replace it with <i>“contaminants.”</i></p>	<p>Partially accepted. New text – If contamination is found in off-site groundwater, how will the Nevada Site Office respond? The Nevada Site Office Environmental Monitoring Program is designed to identify and respond to situations in which elevated levels of contaminants are found. If contamination is suspected, additional analysis will be conducted to determine whether or not contamination actually exists. If contamination can be verified, especially in private wells or community water systems, the Nevada Site Office would request that the wells be shut down and alternative water supplies would be pursued.</p>
<p>On page 6, under the question, “What will be the total cost of the UGTA project?” - due to budget baseline changes since the last publication of this brochure, the dollar amounts will need to be updated. There are a number of changes in the first to fourth sentences of this section as well. All sentences should read as follows:</p> <ul style="list-style-type: none"> <li>• <i>“The total cost of this 138-year effort is projected at (\$ Updated), which includes 100 years of monitoring .During its first 18 years (1989-2007), the UGTA Project has spent approximately (\$ Updated). For the period between 2007 and 2027, when characterization activities will be completed, the NNSA/NSO estimates the cost at (\$ Updated). Between 2027 and 2127, NNSA/NSO calculates that the total cost will be (\$ Updated) to construct the</i></li> </ul>	<p>Partially accepted. New text – The total cost of this 138-year effort is projected at approximately \$2.7 billion, which includes 100 years of monitoring. The cost for the first 18 years of the UGTA Sub- Project (1989-2007) has been approximately \$369 million. For the period between 2007 and 2027, when characterization activities will be completed, the Nevada Site Office estimates the cost at approximately \$433 million. Between 2027 and 2127, the Nevada Site Office calculates that the total cost to construct the necessary 56 wells and conduct long-term monitoring will be approximately \$1.9 billion. The Nevada Site Office may revise the number of wells once additional data from current modeling efforts become available. By conducting modeling now, the Nevada Site Office plans to optimize its long-term</p>

56 wells that are needed and conduct long-term monitoring.”	monitoring efforts by judiciously placing monitoring wells in the most ideal locations.
Under the next question on page 6, “When will the UGTA Project be completed?” – change all the first year, stated at “2130,” to 2027. Change the other two years that are stated as “2030,” to 2027.	Accepted.

<b>Industrial Sites...An Approach to Cleanup -and- Industrial Sites...A Success Story</b>	
<b>CAB Comment</b>	<b>Comment Resolution</b>
The committee recommends combining the two fact sheets into one, and the title will be: <i>Industrial Sites...an approach to cleanup</i> . The revisions are taken from the fold-over fact sheet, entitled: <i>Industrial Sites...a Success Story</i> .	Accepted.
In the first section, the title will read: “ <i>Background</i> .” The words “History and” will be removed, to be consistent with all fact sheets.	Accepted.
In the third sentence of the first paragraph in the <i>Background</i> section, the acronym ( <i>NTS</i> ) should appear in parentheses after the words <i>Nevada Test Site</i> ; the word “ <i>also</i> ” should be changed to “ <i>previously</i> ,” and the words, “ <i>eight off-site locations around the country</i> ” will be removed.	Partially accepted. <i>NTS</i> will be spelled out throughout fact sheet.
In the first sentence of paragraph two, the words “ <i>Nevada Test Site</i> ” will be replaced with the acronym “ <i>NTS</i> .”	Reject. See above.
The third paragraph includes the number of sites that have been identified and the number of sites that have been closed. These numbers will be updated to reflect the most current information.	Accepted.
In the next section, “Approach to Cleanup,” each sub-section should be bulleted and bold, to read as: <ul style="list-style-type: none"> <li>• Housekeeping</li> <li>• Complex Closure</li> <li>• Streamlined Approach for Environmental Restoration (SAFER)</li> </ul>	Accepted.
Also, in the last sentence of the last paragraph in this section, the words “deactivation” and “decommissioning” should begin with a lower-case “d.”	Accepted.
Additionally, on page two in the blue box entitled “FFACO,” a sentence should be added after the first sentence, to read: <ul style="list-style-type: none"> <li>• <i>This agreement governs the remediation activities on the NTS.</i></li> </ul>	Accepted.
In the section entitled “What is Deactivation and Decommissioning?” – this title can be removed, and the entire paragraph underneath the title can be	Accepted.

<p>moved up to be the first paragraph under the section entitled “Deactivation and Decommissioning.”</p>	
<p>In what will now be the third paragraph in this section, beginning with the words: “While contaminated soil...,” – the word “Jr.” in the third sentence should be changed to read: “Junior.”</p>	<p>Accepted.</p>
<p>The fourth sentence in this paragraph should be changed, to read:  <ul style="list-style-type: none"> <li>• <i>To date, three facilities, R-MAD, Junior Hot Cell, and EPA Farm have been deactivated and decommissioned.</i></li> </ul> </p>	<p>Partially accepted. New text - To date, five facilities (R-MAD, Junior Hot Cell, EPA Farm, Test Cell A, and Super Kukla) have achieved closure with the approval of the State of Nevada Division of Environmental Protection. Both the Pluto Disassembly and Test Cell C Facilities are undergoing decontamination and decommissioning using the SAFER method. However, the Pluto Facility will remain standing for potential future use. D&amp;D activities at E-MAD are scheduled to begin in fiscal year 2009.</p>
<p>In the second paragraph under the next section entitled “Better, Cheaper, Faster,” in the second sentence of the second paragraph, take out the words “at the Nevada Test Site.”</p>	<p>Accepted.</p>
<p>The last two sentences in the second paragraph should be combined and revised, which will read:  <ul style="list-style-type: none"> <li>• <i>Using this innovative approach, the mixed low-level waste disposal site is now closed, with a resultant multimillion dollar savings to taxpayers.</i></li> </ul> </p>	<p>Partially accepted. New text - Industrial Sites Sub-Project staff are always looking for new and innovative methods to improve the cleanup process, reduce cost, and speed remediation. Two such methods that have been used are an alternative landfill cover and hydraulic shears.</p> <p>An alternative landfill cover was designed to cover and close a mixed low-level waste disposal cell at the Nevada Test Site. Traditional landfill covers are not appropriate in this region due to the arid conditions. Therefore, project planners developed an innovative approach that received approval from the State of Nevada Division of Environmental Protection and also met Resource Conservation and Recovery Act (RCRA) requirements. The project team decided upon a solution known as an evapotranspiration cover that is a top performer in arid conditions. The cover consists of a compacted soil barrier layer topped with a layer of native vegetation. The process of plant transpiration (i.e., movement of moisture through a plant from the roots to the atmosphere) facilitates evaporation of moisture from the disposal unit. Another key element of the design is the use of time-domain reflectometry sensors to measure soil-water content. Using this innovative approach, the mixed low-level waste disposal site is now closed, saving millions of taxpayer dollars.</p> <p>Hydraulic shears were used at a Nevada Test Site facility with two 500,000 gallon tanks that previously stored gasoline and diesel fuel. Industrial Sites Sub-Project staff were tasked with demolishing the tanks after they were deemed inactive with no plans for future use. The use of hydraulic shears</p>

	helped crews conduct the work safely, and enabled workers to remotely dismantle piping, pumps, fill stands, and other nearby equipment. The hydraulic shears decreased the potential for worker exposure to potential contaminants and sped completion of the project. Using this efficient technology, and practical recycling techniques, the Industrial Sites team successfully completed yet another corrective action site ahead of schedule and under budget. Hydraulic shears have since been used to successfully dismantle Test Cell A and Super Kukla.
On the last page, the entire section that begins with the sentence, “Technology is not the only way...,” and ends with four bullets (not to include “Path Forward), should be bordered and used as an example of ways Industrial Sites technology saves money. Also, within this section, in the first sentence of the first paragraph, the word “and” should be changed to “to.”	Due to spacing issues, this paragraph was removed from the fact sheet.
Also on the last page in the section entitled “Path Forward,” the date “2008” needs to be updated to “2012.”	Accepted.
A definition box should be added to this fact sheet that explains unfamiliar terms.	Accepted.

<b>Tonopah Test Range</b>	
<b>CAB Comment</b>	<b>Comment Resolution</b>
Within the first paragraph under the “History” section, in the second sentence, place a comma after the word “Range.”	Accepted.
In the second paragraph of the “History” section, there are changes to each sentence. The entire paragraph should read as follows: <ul style="list-style-type: none"> <li>• <i>TTR’s features attracted field testing managers from Sandia National Laboratories in the 1950s for several reasons. The desert valley’s dryness left clear pathways for tracking aircraft and airborne weapons; and prevented growth of dense vegetation that would obscure views of bomb impacts. The sparse vegetation limits the amount of wildlife in the area, thus minimizing adverse damage to the wildlife. In addition, the parallel mountain ranges create a hidden valley, assuring that secret testing could be conducted safely and securely.</i></li> </ul>	Partially accepted. New text - In the 1950s, field testing managers from Sandia National Laboratories were attracted to the Tonopah Test Range for many reasons. One of these factors is that the hidden valley formed by the surrounding parallel mountain ranges provides a safe and secure setting for secret testing. Also, the lack of dense vegetation due to the dry environment provides clear pathways for tracking aircraft and airborne weapons, and offers unobstructed views of test package impacts. The sparse vegetation also limits the available food supply, minimizing adverse effects to wildlife.
Changes to the last sentence in the next paragraph should read: <i>Contaminants include unexploded ordnance, heavy metals, pesticides, total petroleum hydrocarbons and hazardous material and radioactive constituents.</i>	Partially accepted. New text - As a result of these non-nuclear yield tests, the environment was contaminated by unexploded ordnance, heavy metals, pesticides, total petroleum hydrocarbons, other hazardous materials and radioactive constituents.

<p>In the fourth paragraph under the “History” section, the last sentence should be moved to the end of the sixth paragraph in this section. The wording in this sentence should be revised, and the revised wording will be noted in the explanation for changes within the sixth paragraph.</p>	<p>Accepted.</p>
<p>The first sentence of the fifth paragraph should be deleted. The second sentence should be added to the fourth paragraph, as the second to the last sentence. With changes, the last two sentences in paragraph five will read as follows:</p> <ul style="list-style-type: none"> <li>• <i>These surveys include locating underground storage tanks and sumps, trace pipes and cables, define leachfields and septic tanks, and map landfill boundaries. They also examine the potential risk to the public and the environment.</i></li> </ul>	<p>Partially Accepted. New text - The Environmental Restoration Project within the U.S. Department of Energy, National Nuclear Security Administration Nevada Site Office (NNSA/NSO) Environmental Management Program is remediating the Tonopah Test Range in response to the environmental concerns resulting from the contamination. Remediation efforts address surface and shallow subsurface soil contamination generated by historic nuclear weapon system storage-transportation tests and support activities. In order to determine the type and extent of contamination, workers conduct studies and surveys referred to as site characterization. During site characterization, underground storage tanks and sumps are located, pipes and cables are traced, leachfields and septic tanks are defined, and landfill boundaries are mapped. The potential risk to the public and the environment is also examined during this process.</p> <p>Before site characterization starts, the contaminated sites are researched and work plans are developed. Scientists collect historic information, interpret aerial and ground photographs, and review engineering drawings. They may also conduct aerial surveys from helicopters with radiation detection equipment in order to map the general location and concentration of radioactive contamination in soil or debris caused by testing activities. Scientists use the information gathered during research and site characterization to select a closure approach for remediating the site. Remediation is then conducted by either the Industrial Sites Sub-Project or the Soils Sub-Project, depending upon the origin of the contamination.</p>
<p>There are a number of changes in paragraph six. Therefore, the entire revised paragraph should read as follows:</p> <ul style="list-style-type: none"> <li>• <i>During the Preliminary Assessment (PA) an inventory of the contaminated sites is conducted to assist in developing a work plan. As part of the inventory, scientists collect historical information, interpret aerial and ground photographs, and review engineering drawings. Scientists also conduct aerial surveys from helicopters with radiation detection equipment. These surveys map the general location and concentration of radioactive soil debris from testing activities. Based on these studies, scientists determine the best options to remove or stabilize the contamination. The cleanup work is conducted by either the Environmental Restoration Industrial Sites Sub-Project or the Soils Sub-Project.</i></li> </ul>	<p>Partially accepted. See above.</p>

On page two, under the “Industrial Sites Project” section, the word “chosen” in the second sentence should be changed to “prioritized.”	Accepted.
The first sentence in the second paragraph should be changed, to read: • <i>Remediation activities are grouped as follows:</i>	Partially accepted. New text - Corrective Action Sites which employ similar remediation techniques are grouped as follows:
Within the third bullet in this paragraph, the word “included” should be changed to “containing.” In the third paragraph of the “Industrial Sites Project” section, all of the numbers need to be updated to reflect the most recent information.	Accepted.
The next section is entitled “Soils Project.” The first sentence in the first paragraph of this section has two changes. The revised sentence will read: • <i>The contaminated soil on the TTR was generated by a joint exercise called Operation Roller Coaster, conducted in 1963 by the United Kingdom, the U.S. Department of Defense, and the Atomic Energy Commission.</i>	Accepted.
In the next paragraph, the second and third sentences will be revised to read: • <i>The sites were characterized and soil was removed and properly disposed of on the Nevada Test Site. Clean Slate II and III have been characterized, but no remediation activities have been conducted.</i>	Partially accepted. New text - Clean Slate II and III remediation activities are expected to begin in 2014.
The next section, “Preparing for the Future” will be removed entirely.	Accepted.
A definition box will be included in this fact sheet that defines unfamiliar words.	Accepted.