POWERTECH (USA) INC.

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Vice President – Environmental
Health and Safety Resources

August 10, 2012

Office of Federal and State Materials and
Uranium Recovery Licensing Branch
Division of Waste Management and Environmental Protection
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

ATTN: Ron Burrows, Project Manager

Re: Powertech (USA) Inc.'s Comments on Draft License SUA-1600; Dewey-Burdock Project; Docket No. 40-9075; TAC No. J 00606

Dear Mr. Burrows:

This letter and the enclosed comments regarding the draft NRC License SUA-1600 are being provided in response to the draft license and transmittal letter dated July 31, 2012. We have enclosed herewith a table showing the draft license condition in the left column with Powertech's comments in the right column. Powertech believes the comments reflect the clarifications provided in the PM-to-PM conference of August 8, 2012. Powertech appreciates the opportunity to review and comment on the draft license.

This letter and Adams-compliant enclosure is being transmitted by email and letter.

We look forward to hearing from you at your earliest convenience should you have additional license conditions or need further clarification from us in this regard.

Sincerely,

Richard E. Blubaugh
Vice President – Environmental, Health & Safety Resources

Enclosures

POWERTECH (USA) INC.

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Draft LC #	Draft License Condition	Powertech Comments
9.1	The authorized place of use shall be the licensee's Dewey-Burdock Project in Fall River and Custer Counties, South Dakota. The licensee shall conduct operations within the license area boundaries shown in Figure 1.4-1 of the approved license application.	No comment
9.2	The licensee shall conduct operations in accordance with the commitments, representations, and statements contained in the license application dated February 29, 2009 (Accession No. ML091200014), which is supplemented by the submittals dated August 10, 2009 (Accession No. ML092870160), December 23, 2010 (Accession No. ML110030730), August 1, 2011 (Accession No. ML112071064), February 27, 2012 (Accession No. ML120620195), April 11, 2012 (Accession No. ML121030013), June 13, 2012 (Accession No. ML12173A038), and June 27, 2012 (Accession No. ML12179A534). The approved application and supplements are, hereby, incorporated by reference, except where superseded by specific conditions in this license. The licensee must maintain at least one complete, updated, and approved license application at the licensed facility. Whenever the word "will" or "shall" is used in the above referenced documents, it shall denote a requirement.	Powertech suggests omitting the December 23, 2010 TR RAI responses (ML110030730), since the June 2011 TR RAI responses (ML112071064) were provided as a complete replacement to the December 2010 and February 2011 (ML110590650) TR RAI responses. Powertech also suggests correcting the submittal dates of ML112071064 and ML091200014 to June 28, 2011 and February 28, 2009, respectively (cover letter dates). Suggested revisions to the first sentence follow. The licensee shall conduct operations in accordance with the commitments, representations, and statements contained in the license application dated February 2~~89~~, 2009 (Accession No. ML091200014), which is supplemented by the submittals dated August 10, 2009 (Accession No. ML092870160), ~~December 23, 2010 (Accession No. ML110030730)~~, June 28~~August 1~~, 2011 (Accession No. ML112071064), February 27, 2012 (Accession No. ML120620195), April 11, 2012 (Accession No. ML121030013), June 13, 2012 (Accession No. ML12173A038), and June 27, 2012 (Accession No. ML12179A534).
9.3	All written notices and reports sent to the U.S. Nuclear Regulatory Commission (NRC) as required under this license and by regulation shall be addressed as follows: ATTN: Document Control Desk, Director, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. An additional copy shall be submitted to: Deputy Director, Decommissioning and Uranium Recovery Licensing Directorate, Division of Waste Management and Environmental Protection, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Two White Flint North, 11545 Rockville Pike, Mail Stop T-8F5, Rockville, MD 20852-2738. Incidents and events that require telephone notification shall be made to the NRC Operations Center at (301) 816-5100 (collect calls accepted).	No comment

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9.4	Change, Test, and Experiment License Condition A) The licensee may, without obtaining a license amendment pursuant to 10 CFR 40.44, and subject to conditions specified in (B) of this condition: i Make changes to the facility as described in the license application (as updated); ii Make changes to the procedures as described in the license application (as updated); and iii Conduct tests or experiments not described in the license application (as updated).	No comment
9.4	B) The licensee shall obtain a license amendment pursuant to 10 CFR 40.44 prior to implementing a proposed change, test, or experiment if the change, test, or experiment would: i Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the license application (as updated); ii Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a facility structure, equipment, or monitoring system (SEMS) important to safety previously evaluated in the license application (as updated); iii Result in more than a minimal increase in the consequences of an accident previously evaluated in the license application (as updated); iv Result in more than a minimal increase in the consequences of a malfunction of an SEMS previously evaluated in the license application (as updated); v Create a possibility for an accident of a different type than any previously evaluated in the license application (as updated); vi Create a possibility for a malfunction of an SEMS	No comment

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	with a different result than previously evaluated in the license application (as updated); vii Result in a departure from the method of evaluation described in the license application (as updated) used in establishing the final safety evaluation report (FSER), environmental impact statement (EIS), environmental assessment (EA) or technical evaluation reports (TERs) or other analysis and evaluations for license amendments. viii For purposes of this paragraph as applied to this license, SEMS means any SEMS that has been referenced in a staff SER, TER, EA, or EIS and supplements and amendments thereof.	
9.4	C) Additionally, the licensee must obtain a license amendment unless the change, test, or experiment is consistent with the NRC's previous conclusions, or the basis of or analysis leading to those conclusions, regarding actions, designs, or design configurations analyzed and selected in the site or facility SER, TER, and EIS or EA. This includes all supplements and amendments, and SERs, TERs, EAs, and EISs issued with amendments to this license.	No comment
9.4	D) The licensee's determinations concerning (B) and (C) of this condition shall be made by a Safety and Environmental Review Panel (SERP). The SERP shall consist of a minimum of three individuals. One member of the SERP shall have expertise in management (e.g., a Plant Manager) and shall be responsible for financial approval for changes; one member shall have expertise in operations and/or construction and shall have responsibility for implementing any operational changes; and one member shall be the radiation safety officer (RSO) or equivalent, with the responsibility of assuring changes conform to radiation safety and environmental requirements. Additional members may be included in the SERP, as appropriate, to address technical aspects such as groundwater or surface water hydrology, specific earth sciences, and other technical disciplines. Temporary members or permanent members, other than the three above-specified individuals, may be consultants.	No comment

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9.4	E) The licensee shall maintain records of any changes made pursuant to this condition until license termination. These records shall include written safety and environmental evaluations made by the SERP that provide the basis for determining changes are in compliance with (B) of this condition. The licensee shall furnish, in an annual report to the NRC, a description of such changes, tests, or experiments, including a summary of the safety and environmental evaluation of each. In addition, the licensee shall annually submit to the NRC changed pages, which shall include both a change indicator for the area changed (e.g., a bold line vertically drawn in the margin adjacent to the portion actually changed) and a page change identification (date of change, change number, or both), to the operations plan and reclamation plan of the approved license application (as updated) to reflect changes made under this condition.	No comment
9.5	Financial Assurance. The licensee shall maintain an NRC-approved financial surety arrangement, consistent with 10 CFR Part 40, Appendix A, Criterion 9, to adequately cover the estimated costs, if accomplished by a third party, for decommissioning and decontamination, which includes offsite disposal of radioactive solid process or evaporation pond residues, and groundwater restoration as warranted. The surety shall also include the costs associated with all soil and water sampling analyses necessary to confirm the accomplishment of decontamination. Proposed annual updates to the financial assurance amount, consistent with 10 CFR Part 40, Appendix A, Criterion 9, shall be provided to the NRC 90 days prior to the anniversary date. The financial assurance anniversary date for the Dewey-Burdock Project will be the date on which the first surety instrument is submitted to the NRC. If the NRC staff has not approved a proposed revision 30 days prior to the expiration date of the existing financial assurance arrangement, the licensee shall extend the existing arrangement, prior to expiration, for 1 year. Along with each proposed revision or annual update of the financial assurance estimate, the licensee shall submit supporting documentation, showing a breakdown of the costs and the basis for the cost estimates with adjustments for inflation, maintenance of a minimum 15-percent contingency of the financial assurance estimate, changes in engineering plans, activities performed, and any other conditions affecting the estimated costs for	In the second paragraph, Powertech requests that the financial assurance anniversary date be changed to the anniversary of NRC staff approval, since there will be no initial instrument in place upon which to base the 12-month update requirement in Criterion 9 until the initial approval. By using the term "submitted" the LC imposes an initial update period that is shorter than the Criterion 9 requirement. Based on meetings with EPA Region 8, the BLM South Dakota Field Office, and the South Dakota Department of Environment and Natural Resources (DENR), Powertech anticipates that financial assurance estimates will be submitted to EPA, BLM, and DENR in addition to NRC. This is consistent with 10 CFR 40, Appendix A, Criterion 9, which says the NRC may accept financial assurance arrangements established to meet the requirements of other Federal or state agencies provided such arrangements are adequate to satisfy the requirements and that the NRC-related portion of the financial assurance is clearly identified and committed for use in accomplishing these activities. Powertech suggests modifying the last sentence in this LC as shown below. Powertech proposes that sufficient information has been provided with the June 2011 TR RAI responses (ML112071064) to demonstrate a "reasonable estimate for the

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	site closure. Within 90 days of NRC approval of a revised closure (decommissioning) plan and its cost estimate, the licensee shall submit, for NRC review and approval, a proposed revision to the financial assurance arrangement if estimated costs exceed the amount covered in the existing arrangement. The revised financial assurance instrument shall then be in effect within 30 days of written NRC approval of the documents. At least 90 days prior to beginning construction associated with any planned expansion or operational change that was not included in the annual financial assurance update, the licensee shall provide, for NRC staff review and approval, an updated estimate to cover the expansion or change. The licensee shall also provide the NRC with copies of financial-assurance-related correspondence submitted to the _____, a copy of the _____ financial assurance review, and the final approved financial assurance arrangement. The licensee also must ensure that the financial assurance instrument, where authorized to be held by a state or other Federal agency, identifies the NRC-related portion of the instrument and covers the activities discussed earlier in this license condition. The basis for the cost estimate is the NRC-approved site decommissioning and reclamation plan and any NRC-approved revisions to the plan. Reclamation and decommissioning cost estimates and annual updates should follow the outline in Appendix C, "Recommended Outline for Site-Specific In Situ Leach Facility Reclamation and Stabilization Cost Estimates," to NUREG-1569, "Standard Review Plan for In Situ Leach Uranium Extraction License Applications—Final Report." The licensee shall continuously maintain an approved surety instrument for the Dewey-Burdock Project, in favor of the _____. The initial surety estimate shall be submitted for NRC staff review and approval within 90 days of license issuance, and the surety instrument shall be submitted for NRC staff review and approval 90 days prior to commencing operations. The initial surety estimate shall include a reasonable estimate for the duration of groundwater restoration based on current experiences at licensed ISR facilities.	duration of groundwater restoration." Specifically, the responses to TR RAI 6.1-6 and 6.1-7 describe how Powertech will use best practicable technology that that has proven effective at achieving groundwater restoration goals and includes timely groundwater restoration (occurring as soon as is reasonably possible following the cessation of recovery operations). These RAI responses describe experiences at licensed ISR facilities and describe how the methods and timing of some of the early uranium ISR projects likely contributed to larger restoration extraction volumes. The phrase "based on current experiences at licensed ISR facilities" fails to account for the site-specific conditions at these facilities, which are not necessarily indicative of Dewey-Burdock site conditions, new processes such as concurrent uranium recovery and groundwater restoration (including construction of groundwater restoration equipment prior to operation so groundwater restoration will not be delayed) as required by NRC's interpretation of 10 CFR 40.42, and the current state of technology for groundwater restoration. Suggested revisions to LC 9.5 are shown below. Financial Assurance. The licensee shall maintain ~~an~~ NRC-approved financial surety arrangements, consistent with 10 CFR Part 40, Appendix A, Criterion 9, to adequately cover the estimated costs, if accomplished by a third party, for decommissioning and decontamination, which includes offsite disposal of radioactive solid process or evaporation pond residues, and groundwater restoration consistent with 10 CFR 40, Appendix A, Criterion 5(B)(5)~~as warranted~~. The surety shall also include the costs associated with all soil and water sampling analyses necessary to confirm the accomplishment of decontamination and groundwater restoration. Proposed annual updates to the financial assurance amount, consistent with 10 CFR Part 40, Appendix A, Criterion 9, shall be provided to the NRC 90 days prior to the anniversary date. The financial assurance anniversary date for the Dewey-Burdock Project will be the date on which the first surety instrument is approved by ~~submitted to the~~ NRC. If ~~the~~ NRC staff has not approved a proposed revision 30 days prior to the expiration date

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		of the existing financial assurance arrangements, the licensee shall extend the existing arrangements, prior to expiration, for 1 year. Along with each proposed revision or annual update of the financial assurance estimate, the licensee shall submit supporting documentation, showing a breakdown of the costs and the basis for the cost estimates with adjustments for inflation, maintenance of a minimum 15-percent contingency of the financial assurance estimate, changes in engineering plans, activities performed, and any other conditions affecting the estimated costs for site closure. Within 90 days of NRC approval of a revised closure (decommissioning) plan and its cost estimate, the licensee shall submit, for NRC review and approval, a proposed revision to the financial assurance arrangement if estimated costs exceed the amount covered in the existing arrangement. The revised financial assurance instrument shall then be in effect within 30 days of written NRC approval of the documents. At least 90 days prior to beginning construction associated with any planned expansion or operational change that was not included in the annual financial assurance update, the licensee shall provide, for NRC staff review and approval, an updated estimate to cover the expansion or change. The licensee shall also provide the NRC with copies of financial-assurance-related correspondence submitted to the EPA, BLM and/or South Dakota Department of Environment and Natural Resources (DENR), a copy of the Federal and/or state agency financial assurance review, and the final approved financial assurance arrangements. The licensee also must ensure that the financial assurance instrument, where authorized to be held by a state or other Federal agency, identifies the NRC-related portion of the instrument and covers the activities discussed earlier in this license condition. The basis for the cost estimate is the NRC-approved site decommissioning and reclamation plan and any NRC-approved revisions to the plan. Reclamation and decommissioning cost estimates and annual updates should follow the outline in Appendix C, "Recommended Outline for Site-Specific In Situ Leach Facility Reclamation and Stabilization Cost Estimates," to NUREG-1569, "Standard Review Plan for In Situ

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		Leach Uranium Extraction License Applications— Final Report." The licensee shall continuously maintain ~~an~~ approved surety instrument(s) for the Dewey-Burdock Project, in favor of the appropriate regulatory agencies. The initial surety estimate shall be submitted for NRC staff review and approval within 90 days of license issuance, and the surety instrument shall be submitted for NRC staff review and approval 90 days prior to commencing operations. The initial surety estimate shall include a reasonable estimate for the duration of groundwater restoration based on best available technology as approved in the license application and based on best available knowledge of Dewey-Burdock site-specific hydrogeological conditions. ~~current experiences at licensed ISR facilities.~~
9.6	Release of surficially contaminated equipment, materials, or packages from restricted areas shall be in accordance with the NRC guidance document entitled, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use or Termination of Licenses for Byproduct, Source, or Special Nuclear Material," (the Guidelines) dated April 1993 (Accession No. ML003745526) or suitable alternative procedures approved by NRC prior to any such release. The Guidelines shall also apply to the removal of equipment, materials, or packages from restricted areas that have the potential for accessible surface contamination levels above background regardless of the intent to release these items for unrestricted use. The licensee shall document their survey of equipment, materials, or packages prior to removing them from a restricted area. Where surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established for alpha- and beta-gamma-emitting nuclides shall apply independently. Personnel performing these contamination surveys for items released for unrestricted use or from restricted areas shall meet the qualifications as health physics technicians or radiation safety officer as defined in Regulatory Guide 8.31. Personal effects (e.g., notebooks and flash lights) which are hand carried need not be subjected to the qualified individual survey or evaluation, but these	Powertech requests the elimination of the second paragraph or further clarification on the intent of this paragraph, since it appears to contradict a common practice of allowing tools or equipment with minimal potential for contamination to be utilized on site at non-connected restricted areas without the need to survey upon exit, as long as these tools or equipment remain under the control of the licensee. This is particularly important for common tools that are located at isolated places within well field areas, including header houses. The second paragraph would potentially create an undue burden on the licensee and provide little benefit in the reduction of potential radiological exposure to site personnel or the public.

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	items should be subjected to the same survey requirements as the individual possessing the items.	
9.7	The licensee shall follow the guidance set forth in NRC Regulatory Guides (as revised) 8.22, "Bioassay at Uranium Recovery Facilities," 8.30, "Health Physics Surveys in Uranium Recovery Facilities," and 8.31, "Information Relevant to Ensuring that Occupational Radiation Exposure at Uranium Recovery Facilities will be As Low As Is Reasonably Achievable (ALARA)" or NRC-approved equivalent.	No comment
9.8	Cultural Resources. Before engaging in any developmental activity not previously assessed by the NRC, the licensee shall administer a cultural resource inventory if such survey has not been previously conducted and submitted to the NRC. All disturbances associated with the proposed development will be completed in compliance with the National Historic Preservation Act (as amended) and its implementing regulations (36 CFR Part 800), and the Archaeological Resources Protection Act (as amended) and its implementing regulations (43 CFR Part 7). In order to ensure that no unapproved disturbance of cultural resources occurs, any work resulting in the discovery of previously unknown cultural artifacts shall cease. The artifacts shall be inventoried and evaluated in accordance with 36 CFR Part 800, and no disturbance of the area shall occur until the licensee has received authorization from the NRC, South Dakota State Historic Preservation Officer, or Bureau of Land Management to proceed.	Powertech asserts that the requirement for authorization from three regulatory entities does not comport with NRC being the lead agency for all activities under 36 CFR Part 800 associated with an NRC license issued pursuant to the Atomic Energy Act (AEA). The listing of three regulatory entities with three different statutory mandates arising under different legal and administrative procedures can result in significant confusion for both the licensee and interested stakeholders. Powertech suggests revising the last sentence as follows. The artifacts shall be inventoried and evaluated in accordance with 36 CFR Part 800, and no disturbance of the area shall occur until the licensee has received authorization from the NRC~~, South Dakota State Historic Preservation Officer, or Bureau of Land Management~~ to proceed.
9.9	The licensee shall dispose of solid byproduct material from the Dewey-Burdock Project operations at a site that is licensed by the NRC or an NRC Agreement State to receive byproduct material. The licensee's approved solid byproduct material disposal agreement must be maintained on site. In the event that the agreement expires or is terminated, the licensee shall notify the NRC within seven working days after the date of expiration or termination. A new agreement shall be submitted for NRC staff review and written verification within 90 days after expiration or termination, or the licensee will be prohibited from further lixiviant injection.	No comment
9.10	The results of the following activities, operations, or actions shall be documented: sampling; analyses; surveys or monitoring; survey/ monitoring equipment calibrations; reports on audits and inspections; all meetings and training courses; and any subsequent reviews, investigations, or corrective actions required by NRC regulation or this	No comment

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	license. Unless otherwise specified in a license condition (LC) or applicable NRC regulation, all documentation required by this license shall be maintained at the site until license termination, and is subject to NRC review and inspection.	
9.11	The licensee is hereby exempted from the requirements of 10 CFR 20.1902(e) for areas within the facility, provided that all entrances to the facility are conspicuously posted with the words, "CAUTION: ANY AREA WITHIN THIS FACILITY MAY CONTAIN RADIOACTIVE MATERIAL."	No comment
10.1	The licensee shall use a lixiviant composed of native groundwater and a combination of carbon dioxide and gaseous oxygen, as specified in the approved license application.	No comment
10.2	Facility Throughput. The Dewey-Burdock Project throughput shall not exceed an average daily flow rate of 4,000 gallons per minute, 2,400 gallons per minute in the Burdock Area processing plant and 1,600 gallons per minute in the Dewey Area satellite plant. The annual production of yellowcake shall not exceed 1 million pounds.	Powertech suggests modifying the facility throughput to be consistent with the response to TR RAI P&R-14(c) in ML112071064. This RAI response states, "During uranium recovery … The typical well field production will be approximately 2,400 gpm … from Burdock well fields and 1,600 gpm …from Dewey well fields … Note that these are typical flow rates provided to illustrate the water balance when the Dewey and Burdock well fields are operating simultaneously. An important value is the sum of [the typical Burdock and Dewey flow rates], which represents the typical project-wide production flow rate. This will be approximately 4,000 gpm, which represents the average annual flow rate proposed at full production for the Dewey-Burdock Project." Note that potential impacts from project-wide production flow rates of 4,000 gpm and 8,000 gpm were assessed in the numerical groundwater model report submitted in February 2012 (ML12062A096). Powertech also suggests clarifying that the 4,000 gpm flow limit will be exclusive of restoration flow, which will be up to 500 gpm as described in the response to TR RAI P&R-14(c) in ML112071064. Suggested revisions to the first sentence are shown below. Facility Throughput. The Dewey-Burdock Project throughput shall not exceed ~~an average daily flow rate of~~ 4,000 gallons per minute (on an average annual basis), excluding restoration flows ~~2,400 gallons per minute in the Burdock Area processing plant and 1,600 gallons per minute in the Dewey Area satellite plant~~.

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10.3	At least 12 months prior to initiation of any planned final site decommissioning, the licensee shall submit a detailed decommissioning plan for NRC review and approval. The plan shall represent as-built conditions at the Dewey-Burdock Project.	No comment
10.4	The licensee shall develop and implement written standard operating procedures (SOPs) prior to operations for: A) All operational activities involving radioactive and nonradioactive materials associated with licensed activities that are handled, processed, stored, or transported by employees; B) All nonoperational activities involving radioactive materials, including in-plant radiation protection, quality assurance for the respirator program, and environmental monitoring; and C) Emergency procedures for potential accidents/unusual occurrences, including significant equipment or facility damage, pipe breaks and spills, loss or theft of yellowcake or sealed sources, significant fires, and other natural disasters The SOPs shall include appropriate radiation safety practices to be followed in accordance with 10 CFR Part 20. SOPs for operational activities shall enumerate pertinent radiation safety practices to be followed. Current copies of the SOPs shall be kept in the area(s) of the production facility where they are utilized. These SOPs are subject to inspection, including the preoperational inspection specified in LC 12.3.	Powertech requests the addition of the qualifier "routine" to operational activities and nonoperational activities, since RWPs will be used for activities that are non-routine for which SOPs have not been developed. Suggested revisions to bullet items A and B follow. A) All routine operational activities involving radioactive and nonradioactive materials associated with licensed activities that are handled, processed, stored, or transported by employees; B) All routine nonoperational activities involving radioactive materials, including in-plant radiation protection, quality assurance for the respirator program, and environmental monitoring; and
10.5	Mechanical Integrity Tests (MITs). The licensee shall construct all wells in accordance with methods described in Sections 3.1.2.2 and 3.1.2.3 of the approved license application. The licensee shall perform well MITs on each injection and production well before the wells are utilized and on wells that have been serviced with equipment or procedures that could damage the well casing. Additionally, the licensee shall retest each well at least once every 5 years. The licensee shall perform MITs in accordance with Section 3.1.2.4 of the licensee's approved license application. Any failed well casing that cannot be repaired to pass the MIT shall be appropriately plugged and abandoned in accordance with Section 6.1.8 of the approved license application.	Powertech suggests modifying the second sentence to reflect more specific language in Section 3.1.2.4 of the license application. Suggested revisions follow. The licensee shall perform well MITs on each injection and production well before the wells are utilized and on wells following any repair where a downhole drill bit or under-reaming tool is used. ~~that have been serviced with equipment or procedures that could damage the well casing.~~

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10.6	Groundwater Restoration. The licensee shall conduct groundwater restoration activities in accordance with Section 6.1 of the approved license application. Permanent cessation of lixiviant injection in a production area would signify the licensee's intent to shift from the principal activity of uranium recovery to the initiation of groundwater restoration and decommissioning for any particular production area. If the licensee determines that these activities are expected to exceed 24 months for any particular production area, then the licensee shall submit an alternate schedule request that meets the requirements of 10 CFR 40.42. Hazardous constituents in the groundwater shall be restored to the numerical groundwater protection standards as required by 10 CFR Part 40, Appendix A, Criterion 5B(5). In submitting any license amendment application requesting review and approval of proposed alternate concentration limits (ACLs) pursuant to Criterion 5B(6), the licensee must also show that it has first made reasonable effort to restore the specified hazardous constituents to the background or maximum contaminant levels (whichever is greater). Notwithstanding the LC 9.4 change process, the licensee shall not implement any changes to groundwater restoration or post-restoration monitoring plans without written NRC verification that the criteria in LC 9.4 do not require a license amendment. The licensee shall submit all changes to groundwater restoration or post-restoration monitoring plans to the NRC staff, for review and written verification, at least 60 days prior to commencement of groundwater restoration in a production area.	No comment
10.7	The licensee shall maintain an inward hydraulic gradient in each individual production area, starting when lixiviant is first injected into the production zone and continuing until the restoration target values (RTVs) have been reached.	Powertech suggests removing the term "restoration target values (RTVs)," which is not used in the license application in the context of the Dewey-Burdock Project and does not reflect Powertech's right, as a matter of law, to submit an ACL application under 10 CFR Part 40, Appendix A, Criterion 5(B)(5). Powertech requests that the LC use the operation-based initiation of the stabilization monitoring period rather than the water quality-based criteria of target restoration goals. Further, Powertech requests that the specific point of compliance for this LC be defined as the perimeter monitor well ring, since this will be the point of compliance for excursion monitoring and since "production area" is not used in the updated monitoring system

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		description in the June 2011 TR RAI responses (ML112071064). Powertech also requests the addition of the word "overall" to the inward hydraulic gradient to reflect that Powertech is committed to maintaining an overall inward hydraulic gradient during uranium recovery and active aquifer restoration except for isolated, localized, short-duration operational imbalances (e.g., well clogging, pump failure, short-term power outage, etc.). Such imbalances will be detected and corrected through operational monitoring and daily balancing of injection and extraction flow rates. Suggested revisions are shown below. The licensee shall maintain an overall inward hydraulic gradient within the perimeter monitor well ring ~~in each individual production area~~, starting when lixiviant is first injected into the production zone and continuing until the initiation of the stabilization monitoring period. ~~restoration target values (RTVs) have been reached.~~
10.8	The licensee is permitted to construct and operate storage and treatment ponds, as described in Section 4.2 of the approved license application. Routine pond inspections will be conducted consistent with inspection procedures described in Regulatory Guide 3.11.	No comment
10.9	The licensee shall establish and conduct an effluent and environmental monitoring program in accordance with those programs described in Section 5.7.8 and Section 5.7.7 of the approved license application.	No comment
10.10	A. Prior to principal activities in a new wellfield, the licensee shall submit a hydrologic test data package to the NRC. The licensee shall submit a hydrologic test package at least 60 days prior to the planned start date of lixiviant injection. In each wellfield data package, the licensee will document that all perimeter monitoring wells are screened in the appropriate horizon in order to provide timely detection of an excursion. The licensee shall not proceed with any lixiviant injection in the new wellfield before it receives written NRC staff verification documenting the NRC staff's review of the hydrologic test data package. Contents of a wellfield package shall include: • A description of the proposed well field (location, extent, etc.) • Map(s) showing the proposed production and injection well patterns and locations of all monitor wells	Powertech requests clarification on why all well field packages require written verification, since operating history after the development of the first well field in each of the Dewey and Burdock areas should be sufficient to allow for subsequent well field packages to be reviewed by the SERP. Powertech has proposed to submit any well field package to NRC if anomalous conditions are present or the SERP evaluation indicates potential to impact human health or the environment (refer to TR RAI 5.7.8-14 response in ML112071064). Powertech requests an estimate of the typical amount of time required to review and verify each well field package. Powertech also requests that "Commission-approved" be changed to "NRC-approved" to clarify that NRC staff will review

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	• Geologic cross sections and cross section location maps • Isopach maps of the production zone sand and overlying and underlying confining units • Discussion of aquifer test procedures, including well completion reports • Discussion of the results and conclusions of aquifer tests, including raw data, drawdown match curves, potentiometric surface maps, water level graphs, drawdown maps and, when appropriate, directional transmissivity data and graphs • Sufficient information to show that wells in the monitor well ring are in adequate communication with the production patterns • All raw analytical data for Commission-approved background • Summary tables of analytical data showing computed Commission-approved background • Descriptions of statistical methods for computing Commission-approved background • Any other information pertinent to the proposed well field area tested will be included and discussed.	and provide written verification of well field packages submitted under this LC. Suggested revisions follow. A. Prior to principal activities in the first ~~a new~~ wellfield in each of the Dewey and Burdock areas, the licensee shall submit a hydrologic test data package to the NRC. The licensee shall submit a hydrologic test package at least 60 days prior to the planned start date of lixiviant injection. In each wellfield data package, the licensee will document that all perimeter monitoring wells are screened in the appropriate horizon in order to provide timely detection of an excursion. The licensee shall not proceed with any lixiviant injection in the new wellfield before it receives written NRC staff verification documenting the NRC staff's review of the hydrologic test data package. Contents of a wellfield package shall include: • A description of the proposed well field (location, extent, etc.) • Map(s) showing the proposed production and injection well patterns and locations of all monitor wells • Geologic cross sections and cross section location maps • Isopach maps of the production zone sand and overlying and underlying confining units • Discussion of aquifer test procedures, including well completion reports • Discussion of the results and conclusions of aquifer tests, including raw data, drawdown match curves, potentiometric surface maps, water level graphs, drawdown maps and, when appropriate, directional transmissivity data and graphs • Sufficient information to show that wells in the monitor well ring are in adequate communication with the production patterns • All raw analytical data for NRC~~Commission~~-approved background • Summary tables of analytical data showing computed NRC~~Commission~~-approved background • Descriptions of statistical methods for computing NRC~~Commission~~-approved background • Any other information pertinent to the proposed well field

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		area tested will be included and discussed.
10.10	B. The licensee will submit for review and approval, hydrologic packages for wellfields B-WF-6, -7, and -8. No extraction will be permitted in the aforementioned wellfields until the NRC staff approves the hydrologic package. Hydrologic packages shall include all the information in paragraph A of this license condition and aquifer test results that address the partially unsaturated conditions of the Chilson Aquifer in these wellfields. These hydrologic packages will also contain a justification for well spacings in the monitoring well ring and overlying and underlying aquifers.	No comment
10.14	The licensee is prohibited from using the "glue and screw" method of joining well casings to construct any monitoring, injection, or production well.	No comment
10.15	The licensee will implement a pre-operational and operational sampling plan as discussed in Section 6.0 of the licensee's South Dakota Department of Environment and Natural Resources, Groundwater Discharge Plan until principal activities at the land application areas cease.	Powertech suggests revising this LC to reflect that land application is only one of two disposal options for treated liquid waste. Powertech does not anticipate using land application if sufficient capacity is available in Class V deep disposal wells. Suggested revisions are shown below. If land application is used, the ~~The~~ licensee will implement a pre-operational and operational sampling plan as discussed in Section 6.0 of the licensee's South Dakota Department of Environment and Natural Resources, Groundwater Discharge Plan until principal activities at the land application areas cease.
10.16	The licensee shall conduct radiological characterization of airborne samples for natural U, Th-230, Ra-226, Po-210, and Pb-210 for each restricted area air particulate sampling location at a frequency of once every 6 months for the first 2 years following issuance of the initial license, and annually thereafter to ensure compliance with 10 CFR 20.1204(g). The licensee shall also evaluate changes to plant operations to determine if more frequent radionuclide analyses are required for compliance with 10 CFR 20.1204(g).	No comment
10.17	The licensee shall ensure radiation safety training is consistent with Regulatory Guide 8.13, "Instruction Concerning Prenatal Radiation Exposure," (as revised); Regulatory Guide 8.29, "Instruction Concerning Risks from Occupational Radiation Exposure," (as revised); and Section 2.5 of Regulatory Guide 8.31 (as revised), or NRC-approved equivalent.	No comment

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11.1	In addition to reports required to be submitted to NRC or maintained on-site by Title 10 of the Code of Federal Regulations, the licensee shall prepare the following reports related to operations at the Facility: A) A quarterly report that includes a summary of excursion parameter concentrations, well placed on or removed from excursion status, corrective actions taken, and the results obtained for all wells that were on excursion status during that quarter. This report shall be submitted to NRC within 60 days following completion of the reporting period.	No comment
11.1	B) A semiannual report that discusses: status of well fields in operation (including last date of lixiviant injection), status of wellfields in restoration and restoration progress, status of any long term excursions and a summary of MITs during the reporting period. This report shall be submitted to NRC within 60 days following completion of the reporting period.	No comment
11.1	C) Quarterly report summarizing daily flow rates for each injection and production well and injection manifold pressures on the entire system. This report shall be made available for inspection upon request.	No comment
11.1	D) Consistent with Regulatory Position 2 of Regulatory Guide 4.14, a semiannual report that summarizes the results of the operational effluent and environmental monitoring program. The licensee shall submit this report consistent with the terms of Regulatory Guide 4.14.	No comment
11.2	The licensee shall submit the results of the annual review of the radiation protection program content and implementation performed in accordance with 10 CFR 20.1101(c). These results shall include an analysis of dose to individual members of the public consistent with 10 CFR 20.1301 and 10 CFR 20.1302.	No comment
11.3	Establishment of Commission-Approved Background Water Quality. Prior to injection of lixiviant in each production wellfield, as defined by the licensee, the licensee shall establish Commission-approved background groundwater quality data for the ore zone, overlying aquifers, underlying aquifers, alluvial aquifers (where present), and the perimeter monitoring areas. Commission-approved background sampling will be performed in accordance with Section 5.7.8 of the	Powertech requests that "Commission-approved" be changed to "NRC-approved" to clarify that NRC staff will review and provide written verification of background water quality. Suggested revisions follow. Establishment of NRC~~Commission~~-Approved Background Water Quality. Prior to injection of lixiviant in each production wellfield,

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	approved license application.	as defined by the licensee, the licensee shall establish NRC~~Commission~~-approved background groundwater quality data for the ore zone, overlying aquifers, underlying aquifers, alluvial aquifers (where present), and the perimeter monitoring areas. NRC~~Commission~~-approved background sampling will be performed in accordance with Section 5.7.8 of the approved license application.
11.4	Establishment of UCLs. Prior to injection of lixiviant into each production wellfield, as defined by the licensee, the licensee shall establish excursion parameters and their respective upper control limits (UCLs) in designated overlying aquifer, underlying aquifer, and perimeter monitoring areas in accordance with Section 5.7.8 of the approved license application. Unless otherwise determined, the site-specific excursion parameters are chloride, conductivity, and total alkalinity. The UCLs shall be established for each excursion control parameter and for each well based on the mean plus five standard deviations of the data collected for LC 11.3. The UCL for chloride can be set at the sum of the background mean concentration and either (a) five standard deviations or (b) 15 mg/L, whichever sum provides the higher limit.	No comment
11.5	Excursion Monitoring. Monitoring for excursions shall occur twice monthly and at least 10 days apart for all wells where UCLs have been established per Section 5.7.8 of the approved license application at all wellfields. If the concentrations of any two excursion indicator parameters exceed their respective UCL or any one excursion indicator parameter exceeds its UCL by 20 percent, then the excursion criterion is exceeded and a verification sample shall be taken from that well within 48 hours after results of the first analyses are received. If the verification sample confirms that the excursion criterion is exceeded, then the well is placed on excursion status. If the verification sample does not confirm that the excursion criterion is exceeded, a third sample shall be taken within 48 hours after the verification sampling. If the third sample shows that the excursion criterion is exceeded, the well is placed on excursion status. If the third sample does not show that the excursion criterion is exceeded, the first sample shall be considered to be an error and routine excursion monitoring is resumed (the well is not placed on excursion status). Upon confirmation of an excursion, the licensee shall notify NRC, as	Powertech suggests modifying the fourth sentence to be consistent with the second sentence. The suggested modifications are shown below. If the verification sample does not confirm that the excursion criterion is exceeded, a third sample shall be taken within 48 hours after the results of the verification sampling are received.

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	discussed below, implement corrective action, and increase the sampling frequency for the excursion indicator parameters at the well on excursion status to at least once every 7 days. Corrective actions for confirmed excursions may be, but are not limited to, those described in Section 5.7.8 of the approved license application. An excursion is considered corrected when concentrations of all indicator parameters are below the concentration levels defining the excursion for three consecutive weekly samples. If an excursion is not corrected within 60 days of confirmation, the licensee shall either (a) terminate injection of lixiviant within the wellfield until an excursion is corrected; or (b) increase the surety in an amount to cover the full third-party cost of correcting and cleaning up the excursion. The surety increase shall remain in force until the NRC has verified that the excursion has been corrected and remediated. The written 60-day excursion report shall identify which course of action the licensee is taking. Under no circumstances does this condition eliminate the requirement that the licensee must remediate the excursion to meet groundwater protection standards as required by LC 10.7 for all constituents established per LC 11.3. The licensee shall notify the NRC Project Manager (PM) by telephone or email within 24 hours of confirming a lixiviant excursion, and by letter within 7 days from the time the excursion is confirmed, pursuant to LC 11.6 and 9.3. A written report describing the excursion event, corrective actions taken, and the corrective action results shall be submitted to the NRC within 60 days of the excursion confirmation. For all wells that remain on excursion after 60 days, the licensee shall submit a report as discussed in LC 11.1(A).	
11.6	Until license termination, the licensee shall maintain documentation on unplanned releases of source or byproduct materials (including process solutions) and process chemicals. Documented information shall include, but not be limited to, the date, spill volume, total activity of each radionuclide released, radiological survey results, soil sample results (if taken), corrective actions, results of postremediation surveys (if taken), a map showing the spill location and the impacted area, and an evaluation of NRC reporting criteria. The licensee shall have written procedures for evaluating the consequences of the spill or incident/event against 10 CFR Part 20,	No comment

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	Subpart M, "Reports," and 10 CFR 40.60 reporting criteria. If the criteria are met, then the licensee shall report to the NRC Operations Center as required. If the licensee is required to report any production area excursions and spills of source material, byproduct material, or process chemicals that may have an impact on the environment, or any other incidents/events, to any State or other Federal agencies, a report shall be made to the NRC Headquarters Project Manager (PM) by telephone or electronic mail (e-mail) within 24 hours. In accordance with LC 9.3, this notification shall be followed, within 30 days of the notification, by submittal of a written report to NRC Headquarters detailing the conditions leading to the spill or incident/event, corrective actions taken, and results achieved.	
11.7	The licensee shall submit semi-annual reports that presents the flow rates and volumes of liquid effluent discharged to the Class V disposal wells and the land application areas, influent flow rates into the satellite and central processing plants, and bleed rates. The first report is due 12 months after the start of operations, and shall account for all effluent discharges and inflows during the previous 12 months.	No comment
11.8	After the initial land use update discussed in LC 12.17, every 12 months, thereafter, the licensee shall submit a land use update report for NRC staff review, until groundwater restoration and decommissioning are completed and approved by the NRC staff.	No comment
12.1	Prior to commencement of operations in any production area, the licensee shall obtain all necessary permits and licenses from the appropriate regulatory authorities. The licensee shall also submit a copy of all permits for its Class III and Class V underground injection wells to the NRC.	No comment
12.2	Prior to commencement of operations, the licensee shall coordinate emergency response requirements with local authorities, fire department, medical facilities, and other emergency services. The licensee shall document these coordination activities and maintain such documentation on-site.	No comment
12.3	The licensee shall not commence operations until the NRC performs a preoperational inspection to confirm, in part, that written operating procedures and approved radiation safety and environmental monitoring programs are in place, and that preoperational testing is complete. The licensee should notify the NRC, at least 90 days prior to the expected commencement of operations, to allow the NRC	No comment

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	sufficient time to plan and perform the preoperational inspection.	
12.4	The licensee shall identify the location, screen depth, and estimated pumping rate of any new groundwater wells or new use of an existing well within the license area and within 2 kilometers (1.25 miles) of any proposed production area since the application was submitted to the NRC. The licensee shall evaluate the impact of ISR operations to potential groundwater users and recommend any additional monitoring or other measures to protect groundwater users. The evaluation shall be submitted to the NRC for review within 6 months of discovery of such well use.	Powertech requests that "production area" be changed to "well field boundary" for consistency with LC 12.11 and the license application. The suggested revision is shown below. The licensee shall identify the location, screen depth, and estimated pumping rate of any new groundwater wells or new use of an existing well within the license area and within 2 kilometers (1.25 miles) of any proposed well field boundary ~~production area~~ since the application was submitted to the NRC.
12.5	Prior to commencement of operations, the licensee shall submit the qualifications of radiation safety staff members for NRC staff review and written verification.	No comment
12.6	Prior to commencement of operations, the licensee shall submit a copy of the solid byproduct material disposal agreement to the NRC.	No comment
12.7	Prior to the start of construction, the licensee will submit to the NRC staff for review and written verification, information regarding the procedures, structures, and/or equipment to address the following: • The containment of spills and contamination within the wellfields and land application areas to prevent migration of such contamination into surface water bodies or ephemeral stream channels. • The protection of wellfields, land application areas, and pipelines from damage, spills, and/or contaminant migration due to flooding. • The procedures for restoring stream channels to the original geomorphology during the decommissioning of facilities.	Powertech believes that the first bullet item is unnecessary and possibly confusing for the following reasons. Powertech has prepared a conceptual design of catchment areas around each land application area to prevent land application solutions and runoff up to and including the 100-year, 24-hour storm event from reaching surface water bodies or ephemeral stream channels. A copy of the conceptual design was provided to NRC under a July 3, 2012 cover letter (ML122090397). The Groundwater Discharge Plan that will be approved by DENR will address the potential migration of contamination from land application areas to surface water bodies or ephemeral stream channels. The June 2011 TR RAI responses (ML112071064) address monitoring and inspection procedures that will be used to detect a potential well field spill. Spill response, cleanup, and soil verification surveys also are addressed. Powertech asserts that NRC was provided sufficient information in the license application concerning action plans related to potential well field spills. Powertech believes that the second bullet item also is unnecessary and possibly confusing for the following reasons. The June 2011 TR RAI responses (ML112071064) present detailed analysis of potential flooding within the project area. The

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		responses to TR RAI MI-5 and 2.7-3 describe the modeled 100-year flood inundation boundaries and describe how facilities will be constructed outside of the flood inundation boundaries or protected from flooding (e.g., well heads will be sealed to withstand brief periods of submergence). Protection of land application areas from flooding will be addressed in the Groundwater Discharge Plan that will be approved by DENR. Powertech asserts that NRC was provided sufficient information in the license application concerning flood protection.
12.8	The licensee will propose, for review and written verification, a monitoring well network for the Fall River Aquifer in the Burdock area for those wellfields in which the Chilson Aquifer is the extraction zone.	Powertech suggests that this LC be omitted as duplicative of LC 10.10(A). Powertech has committed to monitoring all overlying aquifers in each well field (refer to the response to TR RAI 5.7.8-12 in ML112071064). As part of this commitment, the Fall River aquifer will be monitored, where present, in all well fields targeting the Chilson aquifer for uranium ISR. The monitoring network design for the first Burdock well field will be provided to NRC staff for written verification as required by LC 10.10(A).
12.9	The licensee will continue to collect additional meteorological data on a continuous basis at a data recovery rate of 90 percent until the data collected is determined by the NRC staff to be representative of long-term conditions. Justification of the similarity or validity of the data will include analysis of the statistical data presented to illustrate confidence in the representativeness of the data. The data collected shall include, at a minimum, wind speed, wind direction, and an annual wind rose. The submittal shall include a summary of the stability classification.	No comment
12.10	The licensee shall submit preoperational surface water analytical data for the new surface water sampling locations to the NRC within 3 months of the initiation of operations for review and written verification. Surface water analytical data shall be of the same completeness as the data provided in the licensee's June 2011 submittal.	Powertech suggests adding the Accession No. to the June 2011 submittal. The suggested revisions follow. The licensee shall submit preoperational surface water analytical data for the new surface water sampling locations to the NRC within 3 months of the initiation of operations for review and written verification. Surface water analytical data shall be of the same completeness as the data provided in the licensee's June 2011 submittal (Accession No. ML112071064).
12.11	Prior to major site construction, the licensee will collect four quarterly groundwater samples from each well within 2 km (1.25 mi) of the boundary of each wellfield. This data shall be submitted to the NRC staff for review and written verification.	Powertech requests changing "major site construction" to "commencement of operations." The latter is consistent with the license application and similar conditions in recently approved licenses, including LC 12.10 in SUA-1597 and LC 12.7 in SUA-

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		1598. Powertech also requests that the LC be modified to specify the type of wells to monitor. The response to TR RAI 5.7.8-17 in ML112071064 specifies that Powertech will monitor all domestic and stock wells within 2 km of the license boundary prior to operations. Powertech proposes to modify the final TR commitment to match the proposed revisions shown below to include all domestic, stock, and irrigation wells within 2 km of the proposed well field boundaries. This is in agreement with Regulatory Guide 4.14, which recommends sampling all wells that could be used for drinking water, livestock watering, or crop irrigation. Powertech also requests verification that samples collected prior to license approval may be used to satisfy this requirement. Powertech also requests the addition of language to clarify that well fields will be proposed at the time of preoperational monitoring and that sampling will be subject to landowner consent and suitable well conditions for proper sample collection. Suggested revisions are shown below. Prior to commencement of operations ~~major site construction~~, the licensee will collect four quarterly groundwater samples from each domestic, stock and irrigation well within 2 km (1.25 mi) of the boundary of each proposed wellfield, provided the owner consents to the sampling and the well condition is suitable for sampling.
12.12	The licensee per completed the following sampling and monitoring activities and submit the required information 30 days prior to construction:	Powertech requests that the first sentence be changed from "prior to construction" to "prior to commencement of operations" for consistency with similar facility-specific, preoperational LCs in recently approved licenses (e.g., LC 12.6 through 12.15 in SUA-1596, LC 12.7 through 12.14 in SUA-1597, and LC 12.7 through 12.14 in SUA-1598). Suggested revisions follow. The licensee shall ~~per~~ completed the following sampling and monitoring activities and submit the required information 30 days prior to the commencement of operations ~~construction~~:

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12.12	A. The licensee shall establish air particulate sampling stations consistent with Regulatory Guide 4.14 that specifically recommends are particulate stations to be located in a manner consistent with the principal wind directions and in the three sectors with the highest predicted radioactivity concentrations resultant from operations and co-locate radon air samplers and direct radiation and soil sampling with the air particulate sampling stations. Data shall be collected for one year and submitted to the NRC for review and written verification.	Powertech requests clarification of the need for bullet item A. Powertech asserts that NRC was provided sufficient information in the license application concerning the criteria used to establish air particulate sampling locations, including a demonstration that the preoperational air particulate sampling locations satisfy the recommendations of Regulatory Guide 4.14. This was provided in the response to TR RAI 2.9-1 in ML112071064. If NRC staff has determined that a preoperational air particulate station described in the license application is not located in a manner consistent with Regulatory Guide 4.14, Powertech requests clarification of the procedure to obtain NRC verification of an additional preoperational air particulate station.
12.12	B. The licensee shall submit to the NRC for review and written verification, a radiological environmental monitoring program report that will include soil samples collected at both 5-cm depth as described in Regulatory Guide 4.14 and 15-cm for background decommissioning data.	Powertech asserts that justification for the preoperational soil sampling depths was provided in the response to TR RAI 2.9-34 in ML112071064. Please clarify which additional soil sampling locations are requested for 5-cm sampling depth.
12.12	C. The licensee will collect samples from the relocated sediment sample locations at the frequencies specified Regulatory Guide 4.14. This data shall be submitted to the NRC staff for review and written verification.	No comment.
12.12	D. The licensee will provide additional statistical analysis of the soil sampling data and gamma measurements to establish sufficient statistical relationships. If such relationships are not sufficient for use at the site, then additional procedures or data shall be submitted to the NRC staff for review and written verification.	Powertech asserts that statistical analysis of the soil sampling data and gamma measurements was provided in the license application, specifically in the response to TR RAI 2.9-38(b) in ML112071064. Please clarify what additional information is required in this LC.
12.13	Within 30 days of license issuance, the licensee will provide the correct reference to the equations in NUREG-5512 for estimating plant uptake of radionuclides and provide the plant uptake estimates to the NRC for review and written verification.	Powertech proposes to update the equations for estimating plant uptakes of radionuclides to exactly match the NUREG-5512 equations in the revised TR. The revised TR also will include the calculated concentration factors for the various radionuclides and plant types evaluated in the response to TR RAI 2.9-12 in ML112071064. Please confirm whether "plant update estimates" refers to the calculated concentration factors.
12.14	No later than 30 days before the start of operations, the licensee shall provide the NRC staff, for review and verification, its procedures for documenting the wellfield inspections. These procedures shall include the personnel tasked with performing these inspections, items to be inspected, criteria for determining upset conditions, and the manner in which the inspections will be documented.	No comment

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12.15	Within 30 days of the pre-operational inspection, the licensee shall provide to the NRC staff, for review and written verification, its procedures for preparing logs of the dryer and emissions control system performance in accordance with 10 CFR Part 40, Appendix A, Criterion 8. The procedure shall include the manner in which logs for inspection will be produced and maintained at the Dewey-Burdock Project. These procedures shall also specify specific personnel responsible for responding to malfunctions of the dryer and emissions control system and the manner in which such responsible persons are notified of malfunctions.	Powertech suggests modifying "specific personnel" in the last sentence "job position or category" to avoid confusion between job category and specific individuals. The suggested revision follows. These procedures shall also specify job position or category ~~specific personnel~~ responsible for responding to malfunctions of the dryer and emissions control system and the manner in which such responsible persons are notified of malfunctions.
12.16	No later than 90 days before the start of operations, the licensee shall provide the qualifications and training required for RSO designee for reviewing and issuing radiation work permits to the NRC staff for review and written verification.	No comment
12.17	No later than 30 days before the start of operations, the licensee shall submit a report for NRC staff review updating the land use within the Dewey-Burdock Project and within 2 miles of the license boundary. This report shall identify actual land use changes, new structures and the purpose, and new water supply wells and the purpose.	No comment
12.18	The licensee shall ensure radiation safety training is consistent with Regulatory Guide 8.29, "Instruction Concerning Risks from Occupational Radiation Exposure"(as revised); and Section 2.5 of Regulatory Guide 8.31 (as revised), or NRC approved equivalent.	Powertech requests elimination of this LC, which appears to be duplicative of LC 10.17.
12.19	At least 30 days prior to the preoperational inspection, the licensee shall provide the list of instrumentation including the manufacturer, model number and/or a description, and the range of sensitivity of the radiation survey meters proposed by the applicant to measure beta radiation. The licensee shall also provide a plan for conducting beta surveys in process areas.	No comment
12.20	No later than 30 days before the preoperational inspection, the licensee shall submit to the NRC staff for review and written verification an acceptable method to ensure the soluble intake of uranium will be ALARA.	No comment
12.21	The licensee shall submit to the NRC staff for review and approval the procedures by which it will ensure that unmonitored employees will not exceed 10 percent of the dose limits in 10 CFR Part 20, Subpart C.	Powertech suggests changing "review and approval" to "review and written verification" for consistency with approved LC 12.8 in SUA-1596. The proposed revision follows. The licensee shall submit to the NRC staff for review and written verification ~~approval~~ the procedures by which it will ensure that unmonitored employees will not exceed 10 percent of the dose

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		limits in 10 CFR Part 20, Subpart C.
12.22	The licensee shall prepare a bioassay QA/QC procedure that is consistent with Regulatory Guide 8.22. This procedure shall be made available for NRC staff review and written verification during the preoperational inspection.	No comment
12.23	No later than 30 days before the preoperational inspection, the licensee shall develop a survey program for beta-gamma contamination for personnel exiting from restricted areas, which will meet the requirements of 10 CFR Part 20, Subpart F.	No comment
12.24	The licensee shall provide, for NRC staff review and written verification, the surface contamination detection capability (scan MDC) for radiation survey meters used for contamination surveys to release equipment and materials for unrestricted use and for personnel contamination surveys. The detection capability in the scanning mode for the alpha and beta-gamma radiation expected shall be provided in terms of dpm per 100 cm^2.	No comment
12.25	No later than 30 days before the preoperational inspection, the licensee shall provide, to the NRC staff for review and written verification, the following information for the airborne effluent and environmental monitoring program in which it shall develop written procedures to: A. Discuss how, in accordance with 10 CFR 40.65, the quantity of the principal radionuclides from all point and diffuse sources will be accounted-for in, and verified by, surveys and/or monitoring.	No comment
12.25	B. Evaluate the member(s) of the public likely to receive the highest exposures from licensed operations consistent with 10 CFR 20.1302.	No comment
12.25	C. Discuss and identify how radon (radon-222) progeny will be factored into analyzing potential public dose from operations consistent with 10 CFR Part 20, Appendix B, Table 2.	No comment
12.25	D. Discuss how, in accordance with 10 CFR 20.1501, the occupational dose (gaseous and particulate) received throughout the entire license area from licensed operations will be accounted-for in, and verified by, surveys and/or monitoring.	No comment

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12.26	The applicant will submit to the NRC for review and approval a revised decommissioning, decontamination, and reclamation plan within 90 days of receipt of license. The revised plan will include soil cleanup criteria for radionuclides other than radium based on the radium benchmark dose method, as well as procedures to monitor for beta-gamma contamination on equipment, structures, and material released for unrestricted use. The soil cleanup criteria, based on the radium benchmark dose methodology for U and other radionuclides, will demonstrate that residual radioactivity in soil meets the criteria in 10 CFR Part 40, Appendix A, Criterion 6(6).	No comment
12.27	At least 60 days prior to the preoperational inspection, the licensee will submit a completed Quality Assurance Project Plan (QAPP) to the NRC for review to verify that the QAPP will be consistent with Regulatory Guide 4.15 (as revised).	No comment
12.28	Prior to the start of operations, the licensee shall submit a report to the NRC for review and verification that all water supply wells within one kilometer of the license area have been sampled for baseline quality and included in the routine environmental sampling program provided the owner consents to the sampling.	Powertech suggests revising this LC as shown below for consistency with the response to TR RAI 5.7.8-17 in ML112071064) and LC 12.11 (with suggested revisions). Justification for the preoperational sampling commitment is provided in the comment on LC 12.11. The operational monitoring commitment in the response to TR RAI 5.7.8-17 includes domestic wells within 2 km of the license boundary and stock wells within the license boundary. Powertech proposes to revise this commitment for consistency with LC 12.11 (with suggested revisions) to include domestic and irrigation wells within 2 km of the proposed well field boundaries and stock wells within the license area. Prior to the start of operations, the licensee shall submit a report to the NRC for review and verification that all domestic, stock, and irrigation water supply wells within 2 km (1.25 miles) ~~one kilometer~~ of the proposed wellfield boundaries ~~license area~~ have been sampled for baseline quality and that all domestic and irrigation wells within 2 km (1.25 miles) of the proposed wellfield boundaries and all stock wells within the license area are included in the routine environmental sampling program provided the owner consents to the sampling and the well condition is suitable for sampling.

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MON - 13 AUG A1
STANDARD OVERNIGHT

TRK# 0201 7938 9288 2490

XC OBTA

20852
MD-US
IAD

515G2/0C34/AA44

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
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