Uranerz
ENERGY CORPORATION

June 26, 2015

Attn: Document Control Desk
Director,
Office of Federal and State Materials and
Environmental Management Programs
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Deputy Director,
Decommissioning and Uranium Recovery Licensing Directorate
Division of Waste Management and Environmental Protection
Office of Federal and State Materials and Environmental Management Protection
Mail Stop T-8F5
11545 Rockville Pike
Two White Flint North
Rockville, MD 20852-2738

RE: Uranerz Energy Corporation, Nichols Ranch ISR Project, NRC License SUA-1597, Docket No. 40-9067 (TAC J00726), Jane Dough Unit License Amendment Request

Dear Director and Deputy Director,

Recently Uranerz Energy Corporation (Uranerz) responded to Wyoming Department of Environmental Quality, Land Quality Division (WDEQ-LQD) technical comments regarding the Jane Dough Amendment. A copy of that submittal is enclosed. Several pages were revised in coordination with Uranerz responses and where relevant, those revisions need to be captured in the NRC Jane Dough Amendment documents as well.

Furthermore, since the Jane Dough Amendment was submitted last year, various SERP's have been completed resulting in minor page changes to the current license application. To maintain consistency between the current license application and the Jane Dough Amendment documents Uranerz is also submitting those revisions for inclusion into the Jane Dough Amendment. An Index of Change is enclosed listing the information necessary to replace the pages and figures.

Six copies of the page changes are being supplied to the NRC. One copy is being sent to Document Control and the five remaining copies will go to the Deputy Director. If there are any questions

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NMSSZO

regarding the Nichols Ranch ISR Project, Jane Dough Amendment submittal, please contact me at the Casper office at 307-265-8900 or by email at mthomas@uranerz.com.

Sincerely,

Michael P. Thomas
Vice President, Regulatory and Public Affairs
Uranerz Energy Corporation

MT/dk

Enclosures:
Courtesy Copy of WDEQ-LQD comment and responses (1 copy to Document Control Desk only)
Replacement Pages, Index of Change (6 copies)

cc: David Brown, Jane Dough Project Manager
Ron Linton, NRC Project Manager (cover letter only via email)

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INDEX SHEET FOR MINE PERMIT AMENDMENTS OR REVISIONS

Date 6/26/15
TAC: J00726
License NO.: 1569

MINE COMPANY NAME: Uranerz Energy Corporation
MINE NAME: Nichols Ranch ISR Project

Statement: I, Michael P. Thomas, an authorized representative of Uranerz Energy Corporation declare that only the items listed on this and all consecutively numbered Index Sheets are intended as revisions to the current permit document. In the event that other changes inadvertently occurred due to this revision, those unintentional alterations will not be considered approved. Please initial and date. MPT 6-26-15

NOTES:
1) Include all revision or change elements and a brief description of or reason for each revision element.
2) List all revision or change elements in sequence by volume number; number index sheets sequentially as needed.

Volume Number	Page, Map or other Permit Entry to be REMOVED	Page, Map or other Permit Entry to be ADDED	Description of Change
Jane Dough Amendment Volume I	Mine Plan: Chapter 1, pg. TR-2	Mine Plan: Chapter 1, pg. TR-2	Page TR-2 is being replaced as it has been revised to account for 'three' units vs. the previously stated two. Figure 3-12 was updated and needs to be replaced.
Jane Dough Amendment Volume I	Mine Plan: Chapter 2, Figure 2-1	Mine Plan: Chapter 2, Figure 2-1	This figure is being replaced with an updated version which was SERP'd in 2013.
Jane Dough Amendment Volume I	Mine Plan: Chapter 3, Section 3.4.3, pgs. TR-180 and TR-180a,	Mine Plan: Chapter 3, Section 3.4.3, pgs. TR-180 and TR-180a	The pages were updated per a SERP completed at site with pages changes made in the existing license application. These items have also been reviewed and approved by WDEQ-LQD in the current Permit to Mine No. 778.
Jane Dough Amendment Volume I	Mine Plan: Chapter 3, Section 3.4.5, pg TR-182	Mine Plan: Chapter 3, Section 3.4.5, pg TR-182	The pages were updated per a SERP completed at site with pages changes made in the existing license application. These items have also been reviewed and approved by WDEQ-LQD in the current Permit to Mine No. 778.
Jane Dough Amendment Volume I	Mine Plan: Chapter 3, Section 3.4.6, Pgs. TR-184 and TR-185	Mine Plan: Chapter 3, Section 3.4.6, Pgs. TR-184 and TR-185	The two pages were revised in response to LQD comments and to keep the documents consistent is being revised herein.
Jane Dough Amendment Volume I	Mine Plan: Chapter 3, Figures 3-9A through 3-9C, 3-12, 3-13	Mine Plan: Chapter 3, Figures 3-9A, 3-9B, 3-12, 3-13	The figures have been revised to reflect changes in the text.
Jane Dough Amendment Volume I	Mine Plan: Chapter 5, Section 5.1.1, Pgs TR-201 through TR-206, Figure 5-1	Mine Plan: Chapter 5, Section 5.1.1, Pgs TR-201 through TR-206, Figure 5-1	The pages and figure were updated via SERP's and page changes reflect the existing license application
Jane Dough Amendment Volume I	Mine Plan: Chapter 7, Section 7.2.5.2.8, pg. TR-292	Mine Plan: Chapter 7, Section 7.2.5.2.8, pg. TR-292	The page was revised in response to LQD comments and to keep the documents consisten is being revised herein.

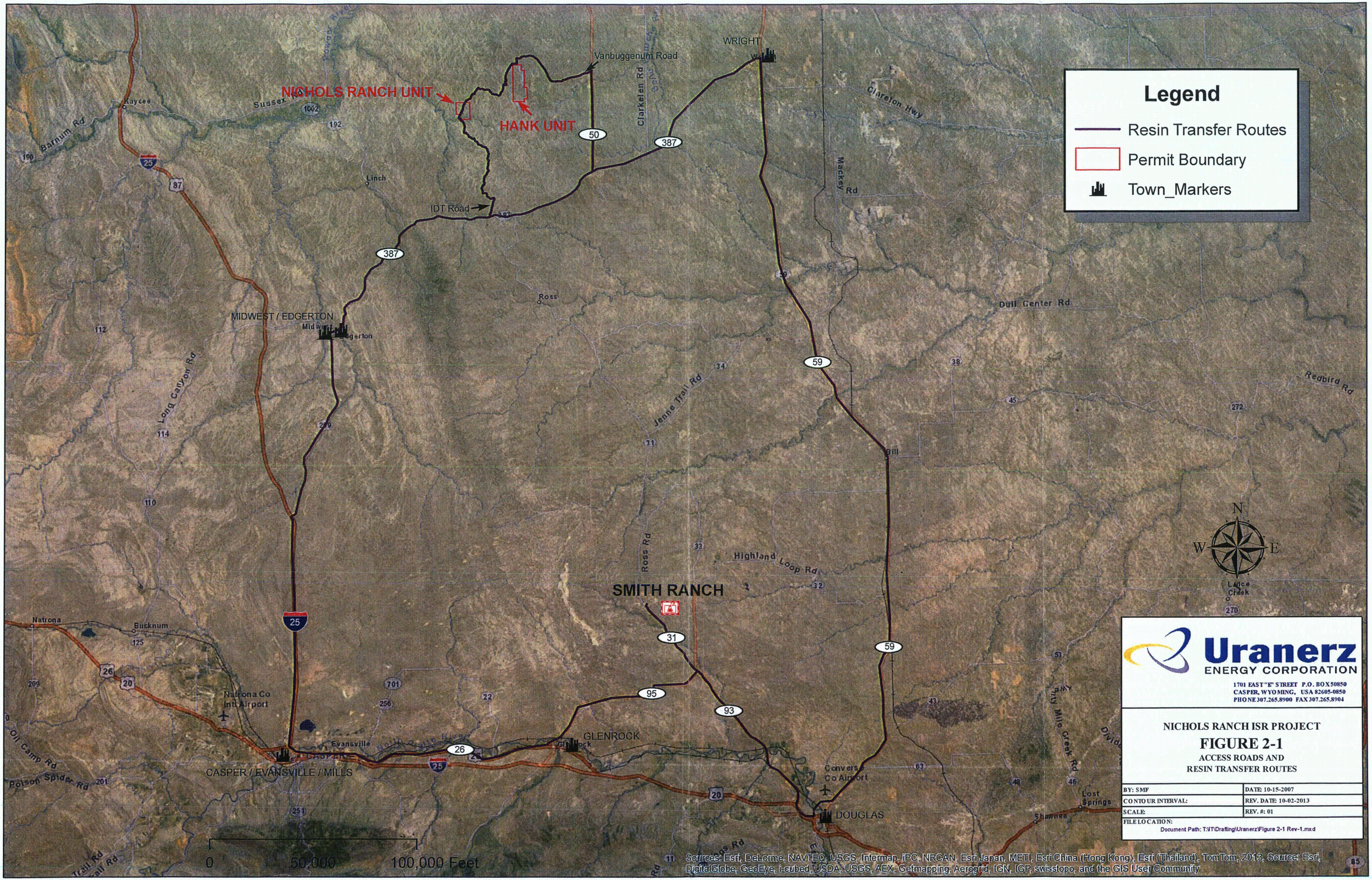
(gpm) and an annual production of 500,000 pounds. The satellite facility at the Hank Unit will have a designed flow rate of 2,500 gpm and an annual production of 300,000 pounds. Construction for the **three** units is estimated at approximately one year, but could be accelerated. The Nichols Ranch Unit should have a six month ramp up to the full annual production, and after the Nichols Ranch Unit ramp up, the Hank Unit will start a 6 month ramp up phase to the full annual production. It will take an estimated 3-4 years to extract the uranium from the Nichols Ranch Unit and an estimated 4 to 5 years to extract the uranium from the Hank Unit. **The wellfield production from the Jane Dough Unit is planned to start at the end of the Nichols Ranch production. Therefore only restoration at Nichols Ranch will be occurring while the production from the Jane Dough Unit occurs. It will take an estimated 3-4 years to extract uranium from the Jane Dough Unit.** The details for the operating plans are presented in Chapter 3.0.

The plans for project waste management and disposal are two fold. Uranerz plans to permit and install deep disposal wells at both the Nichols Ranch Unit and at the Hank Unit. The deep disposal wells will receive liquid waste. Uranerz will also have an agreement with an approved waste disposal facility for 11e (2) byproduct material. The details of the groundwater restoration, decommissioning, and land reclamation are discussed in Chapter 6.0. There is a detailed Gantt chart showing production schedules, groundwater restorations plans, and decommissioning/reclamation plans in Chapter 3.0.

The Wyoming Department of Environmental Quality will hold Reclamation Performance Bonds that cover facility decommissioning and groundwater and surface reclamation. Uranerz will update the bonds on an annual basis according to the Annual Surety Estimate Revision. The annual revisions are reviewed and approved by the U.S. Nuclear Regulatory Commission and Wyoming Department of Environmental Quality. The annual updates account for new areas that are disturbed or areas that have been reclaimed. Uranerz will also be applying for an Aquifer Exemption and Deep Disposal Well permits with the Wyoming Department of Environmental Quality.

1.2 GENERAL SOLUTION MINING PROCESS

The solution extraction process that Uranerz will use for the Nichols Ranch ISR Project is the general in situ recovery process for solution mining. This process, involving the dissolution of the water soluble uranium compound from the mineralized host sandstone rock at neutral pH ranges,



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NICHOLS RANCH ISR PROJECT

FIGURE 2-1

ACCESS ROADS AND
RESIN TRANSFER ROUTES

BY: SMF	DATE: 10-15-2007
CONTOUR INTERVAL:	REV. DATE: 10-02-2013
SCALE:	REV. #: 01
FILE LOCATION: Document Path: T:\IT\Drafting\Uranerz\Figure 2-1 Rev-1.mxd	

bleed will be disposed of in a Class I deep disposal well. With the cone of depression being created, the natural groundwater movement from the surrounding areas is toward the wellfield providing an additional control of the leaching solution.

Wellfield bleed is defined as the difference between the amount of solution injected and produced. The bleed rate is anticipated to average 1% of the total production rate for the Nichols Ranch Unit and up to 3% for the Hank Unit. Over- production can be adjusted to guarantee the horizontal ore zone monitor wells are influenced by the cone of depression from the wellfield bleed.

Depending on the oxidation requirement of the formation, the injection wells may be equipped with oxygen spargers so that each well can be controlled as to the amount of oxygen concentration it receives, or a header house oxygen manifold distributor will be installed. Header houses are small buildings that contain the manifolds with valves, piping, and instrumentation for injection and recovery wells. Each header house will contain approximately **110** well accommodations, but may contain more or less. **The typical header house design is shown in Figure 3-9A Header House Details (see map pocket), and the details of the piping and instrumentation for the header house is shown in Figure 3-9B Header House Piping and Instrumentation (see map pocket).**

The header houses will be metal buildings. **The dimensions for the header houses will be approximately 40 feet by 20 feet, but may be more or less. The terrain and logistics in the wellfield will determine which engineered foundation (e.g. pad, pillar, or basement) the header house will be built on. The foundations will be constructed of durable materials that meet engineering requirements or other suitable materials with sealed penetrations (as needed) to provide containment.** The foundation will have grating which will allow access to the sub floor containing valves and hose runs. **The floor will curb and/or slope to a sump with an automatic level control pump. The sump will pipe to the recovery system and will include check valves. In header houses with basements the basement will contain the hose runs and injection and recovery lines. The header house may be designed to contain the electrical equipment in the same room with the piping or the electrical room may be attached to the main header house building and placed on concrete pillars that are buried underground for structural support.**

There are two separate solution trunk lines connecting the header houses. One of the trunk lines will take the recovery solutions from the header houses back to the processing plants, and the other trunk line will take injection fluid from the plants out to the header houses for injection into the wellfields. The actual number of header houses will depend on field placement of wells.

At each header house the individual injection and recovery flow and pressure readings can be monitored. Individual well flow readings will be recorded on a shift basis, and the overall wellfield flowrates will be balanced at least once per day. Alternately, flow and totallizer data will be transferred to the main or satellite plant and checked automatically. The recovery and injection trunk lines will have electronic pressure gauges and the information will be monitored from the Unit's control room. The control system will have high and low alarms for pressure and flow. If the pressure and/or flow is out of range the alarms will alert personnel to make adjustments, and certain ranges will signal automatic shutoffs or shutdowns.

The pipelines transport the wellfield solutions to and from the ion exchange columns. The flow rates and pressures are monitored to the individual lines. Automatic valves are installed for control of the flow. High density polyethylene (HDPE), Polyvinyl chloride (PVC), and/or stainless steel piping are used in the wellfield. The piping will be designed for operating pressure of 150 psig. However, the equipment will be operated at pressures less than or equal to the designed piping and other equipment ratings. If higher operating pressures are needed, the overall system will be evaluated and materials of construction with appropriate pressure ratings will be used.

Some of the lines from the ion exchanges facilities, header houses, and individual well lines may be buried to prevent freezing. Other ISR sites in Wyoming have successfully buried pipelines to protect them from freezing.

The amount of time for restoration shown in Figure 3-12 is based on the current estimate of deep disposal well capacity and the restoration methods outlined in Chapter 6.0 of the Technical Report. As stated in Chapter 6.0, Section 6.1, Uranerz will adhere to 10 CFR 40.42. When decommissioning and/or restoration begin, the NRC will be notified and a plan submitted for review or approval. If, at that time, groundwater restoration is estimated to take longer than 24 months based on items such as deep disposal well capacity, Uranerz will request an alternate schedule as allowed under 10 CFR 40.42(i).

After each production area is completed, aquifer restoration will begin as soon as practical. If a completed production area is near a unit that is currently being mined, a portion of the first production area's restoration may be delayed to limit interference with the current extraction production area. The exact production area size and location may change based on the final delineation results of the ore zone and the actual production performance of the particular ore zone.

3.4.5 Well Completion

Pilot holes for monitor, production, and injection wells are drilled through the target completion interval with a small rotary drilling unit using native mud and a small amount of commercial drilling fluid additive for viscosity control. **In some instances, pilot holes may be drilled into the underlying aquitard if a completion interval is at the bottom of the production sandstone to allow for maneuverability during logging and well completion of the production zone. The hole is logged, reamed, casing set, and cemented to isolate the completion interval from all other aquifers and prevent fluid migration.** The cement will be placed by pumping it down the casing and forcing it out the bottom of the casing and back up the casing-drill hole annulus. The drill holes will be large enough in diameter for adequate sealing and, at any given depth, at least three inches greater in nominal diameter than the diameter of the outer casing at that depth.

Typical well completion schematics for production wells (recovery and injection wells), and monitor wells are shown on Figures 3-13 (see map pocket) and 3-14 (see map pocket),

3.4.6 Well Casing Integrity

After an injection, recovery **or monitor** well has been completed, and before it is made operational, a Mechanical Integrity Test (MIT) of the well casing is conducted. For the integrity test, the bottom of the casing adjacent to or below the confining layer above the production zone is sealed with a plug, down hole packer, or other suitable device. The top of the casing is then sealed in a similar manner or with a sealed cap, and a pressure gauge is installed to monitor the pressure inside the casing. The pressure in the sealed casing is then increased to 125% of the maximum operating wellhead casing pressure or to an amount less than the formation fracture pressure (which is less). The well pressure is then monitored for a period of 10 minutes. A well is considered satisfactory with a pressure drop of no more than 10%.

If there are obvious leaks, or the pressure drops by more than 10% during the 10 minute period, the seals and fittings will be reset and/or checked and another test is conducted. If the pressure drops less than or equal to 10% the well casing is considered to have demonstrated acceptable mechanical integrity.

The results of the MITs conducted during a quarter are documented on a quarterly bases to include the well designation, date of the test, method by which the MIT was completed, verification of whether the MIT was or was not established, test duration, beginning and ending pressures, and the signature of the individual responsible for conducting the test. Results of the MITs are maintained on site and are available for inspection by NRC and WDEQ personnel. In accordance with regulatory requirements the results of MITs are reported to the WDEQ on a quarterly basis for those wells that were tested. In accordance with WDEQ and EPA requirements, MITs are repeated once every five (5) years for all wells used for injection of lixiviant, or injection of fluids for restoration operations. **MITs on production area monitor wells are also repeated every 5 years as required by NRC license.**

If a well casing does not meet the MIT criteria, the well will be placed out of service and the casing may be repaired and the well re-tested or abandoned. If a repaired well passes the MIT, it will be employed in its intended service. If an acceptable test cannot be obtained after repairs, the well will be plugged and abandoned. The WDEQ-LQD Administration will be notified in

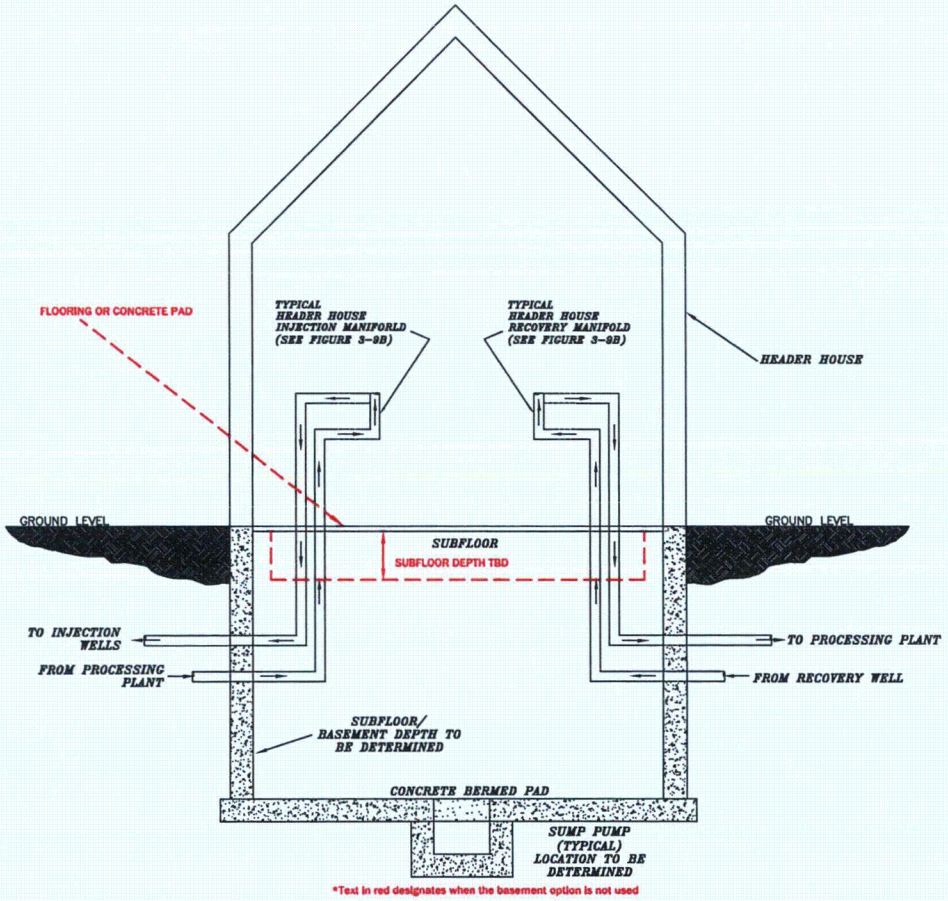
the quarterly report of wells that fail the MIT. In the quarterly report the following is required: the identification of the failed well, a description of the method of plugging or repair, a status of the corrective actions on defective wells, the results of well plugging or repair, statements that the wells were plugged according to the approved permit and that the volume of material used for plugging equals the volume of material placed in the well.

The injection pressures for the Class III wells for the Nichols Ranch Unit, the Hank Unit, **and Jane Dough** will be calculated to assure the pressure in the production zones do not generate new fractures or spread existing fractures. Uranerz Energy Corporation will operate the Class III wells in a manner that the injection pressure will be lower than the calculated pressure that could fracture the confining zone, or cause the injection fluid to migrate to unauthorized zones. The injection pressure for the Nichols Ranch Unit, Hank Unit, **and Jane Dough Unit** will be no greater than 60% (range – 38% to 60%) of the formation fracture pressure and will not exceed the pressure rating of the casing.

Search of published fracture gradient information resulted in selecting a conservative fracture gradient of 0.80 psi/ foot of depth, for reservoir rock formations of 2,000 feet in depth or less. The following range for maximum injection pressures are: average depth for Nichols Ranch (600 ft X 0.80 psi/foot = 480 psi), **average depth for Jane Dough (500 ft X 0.80 psi/foot = 400 psi)** and average depth for Hank (375 ft X 0.80 psi/foot = 300 psi). The range of 480 psi to 300 psi is greater than the maximum injection pressure ratings for PVC casing that Uranerz intends to use. The maximum operating pressure rating for SDR 17 casing is 180 psi and for SDR 21 casing (if used would only be at Hank) is 130 psi. MIT testing will be conducted at the maximum operating pressure of the installed casing. The casing pressure rating; therefore, will be the limiting factor and maximum injection pressure would be 180 psi. At Nichols Ranch 180 psi is 38% of the formation fracture pressure and for Hank it is 60% of the formation fracture pressure.

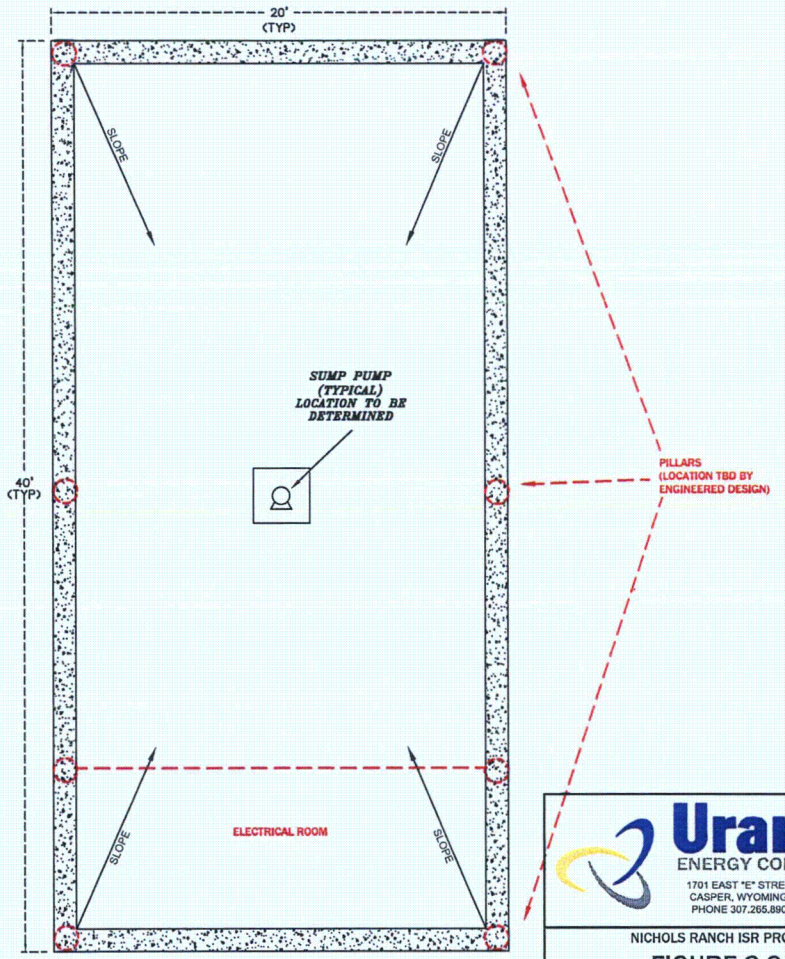
Injection wells will not be used for injection purposes if they do not demonstrate mechanical integrity. Additionally, a MIT will be conducted on any well to be used for injection purposes after any well repair where a down hole drill bit or under reaming tool is used. Any injection well with evidence of suspected subsurface damage will require a new MIT prior to the well being returned to service.

Section view



*Text in red designates when the basement option is not used

Plan view



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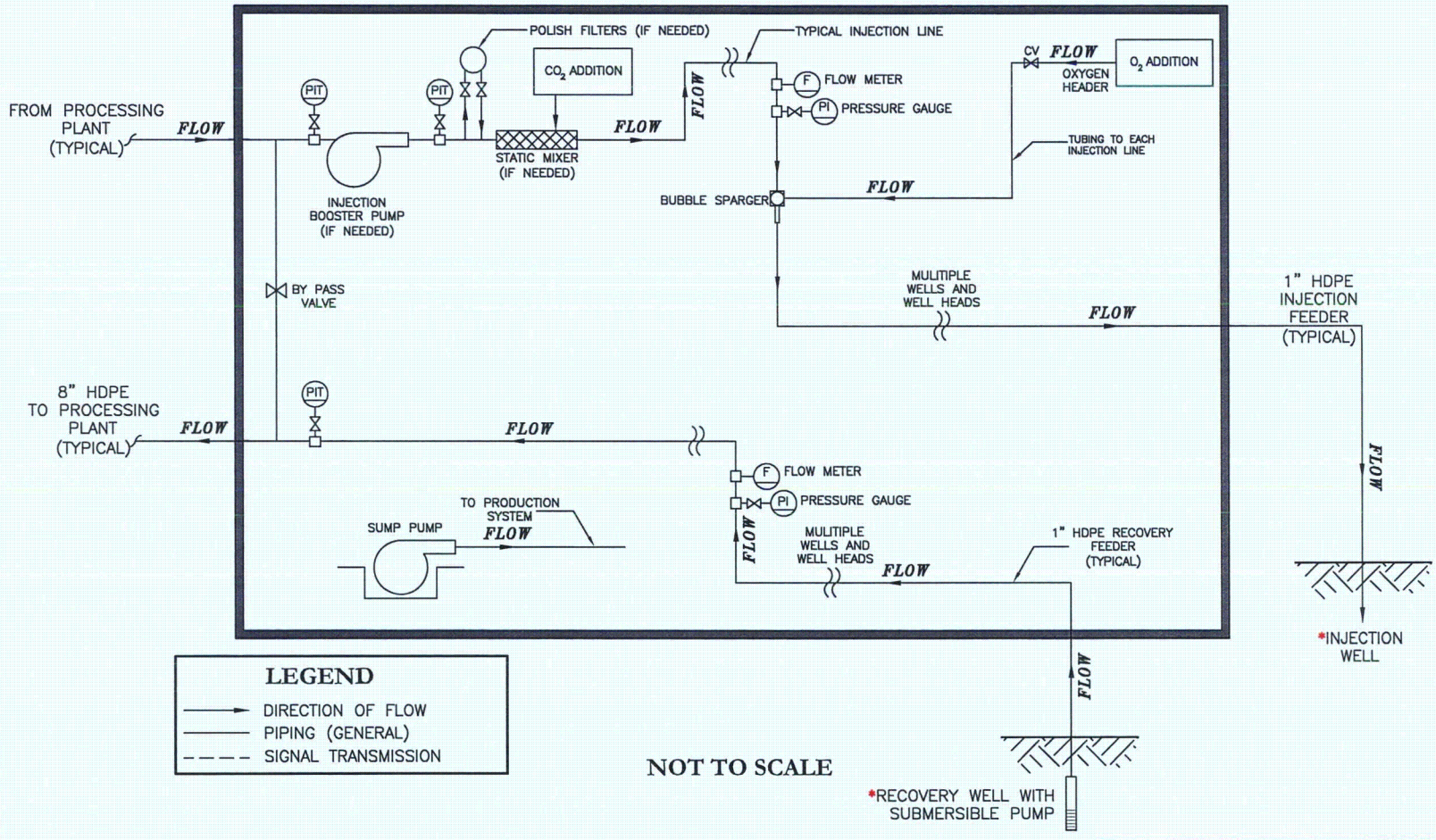
NICHOLS RANCH ISR PROJECT

FIGURE 3-9A
HEADER HOUSE DETAILS (TYPICAL)

By: ADAM EVENSON	Date: 2/22/2008
Datum: N/A	Revision Date: 04/9/2015
Scale: NOT TO SCALE	Contour Interval: N/A



LEGEND

- DIRECTION OF FLOW
- PIPING (GENERAL)
- SIGNAL TRANSMISSION

NOT TO SCALE

*NOTE: MAY CONTAIN UP TO 110 WELL ACCOMMODATIONS, APROXIMATELY 70 INJECTION AND 40 RECOVERY, OR A VARIATION THEREOF

File Location: T:\IT\Drafting\Uranerz\Regulatory\Figures

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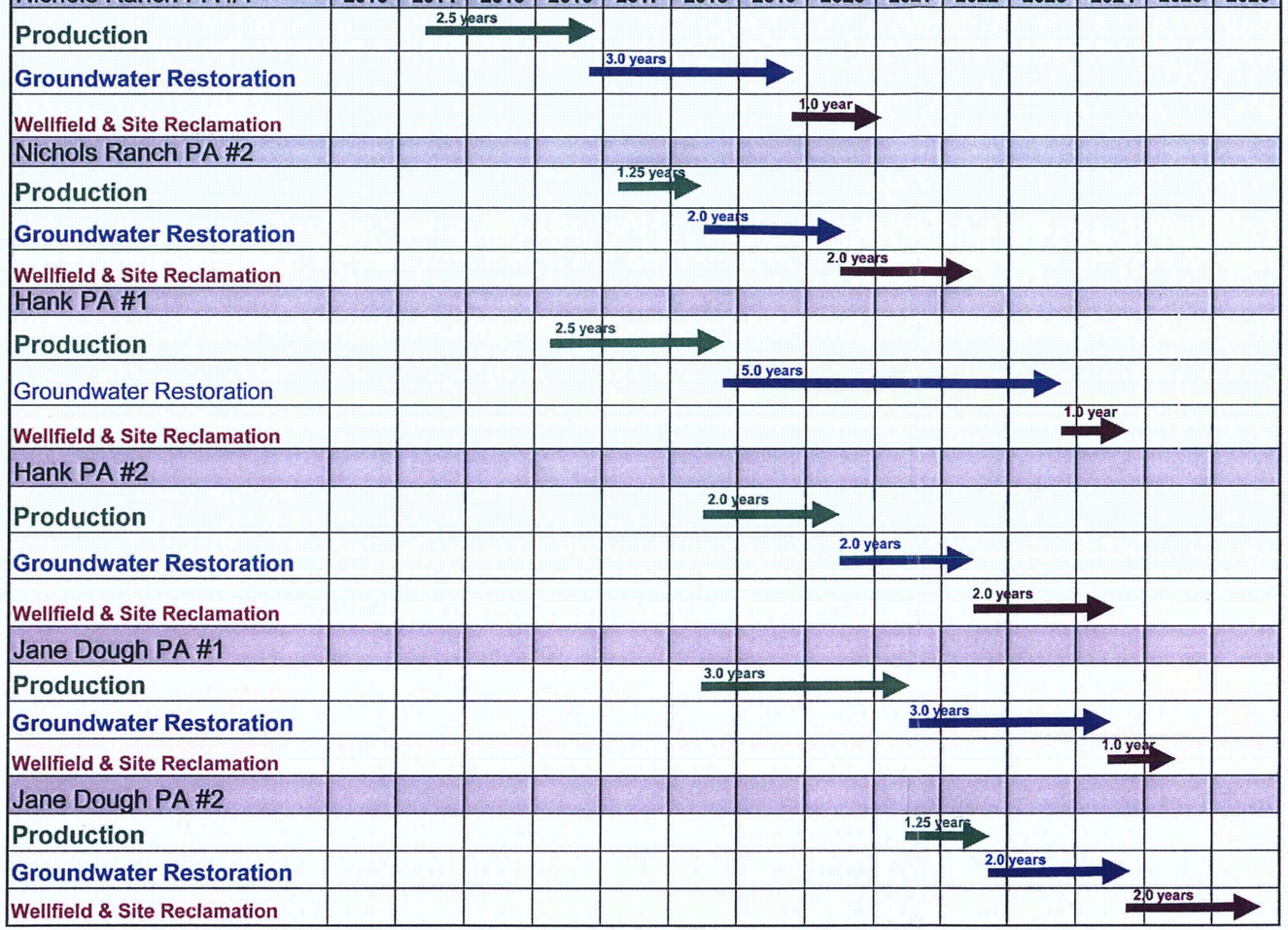
NICHOLS RANCH ISR PROJECT

FIGURE 3-9B

HEADER HOUSE PIPING AND INSTRUMENTATION (TYPICAL)

By: DALTON TIMM	Date: 2/22/2008
Datum: N/A	Revision Date: 04/14/2015
Scale: NOT TO SCALE	Contour Interval: N/A

Projected Production, Restoration, and Reclamation Schedule
Nichols Ranch, Hank and Jane Dough Units



Note: Nichols Ranch Unit is divided into two production areas: Nichols Ranch Production Area #1 and Nichols Ranch Production Area #2. Hank Unit is divided into 2 production areas: Hank Production Area #1 and Hank
This is a projected estimate for Production, Restoration and Reclamation. The actual schedule will depend on construction efficiency, actual production results and actual restoration of the groundwater.

5/8/2015

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USA 82605-0850

Figure 3-12

Nichols Ranch ISR Project

Production, Restoration & Reclamation Schedule

Drawn: BW Checked: SK

Date: 01/05/2014

Revision	Description
3/11/14	Add Jane Dough
05/11/15	Add Jane Dough

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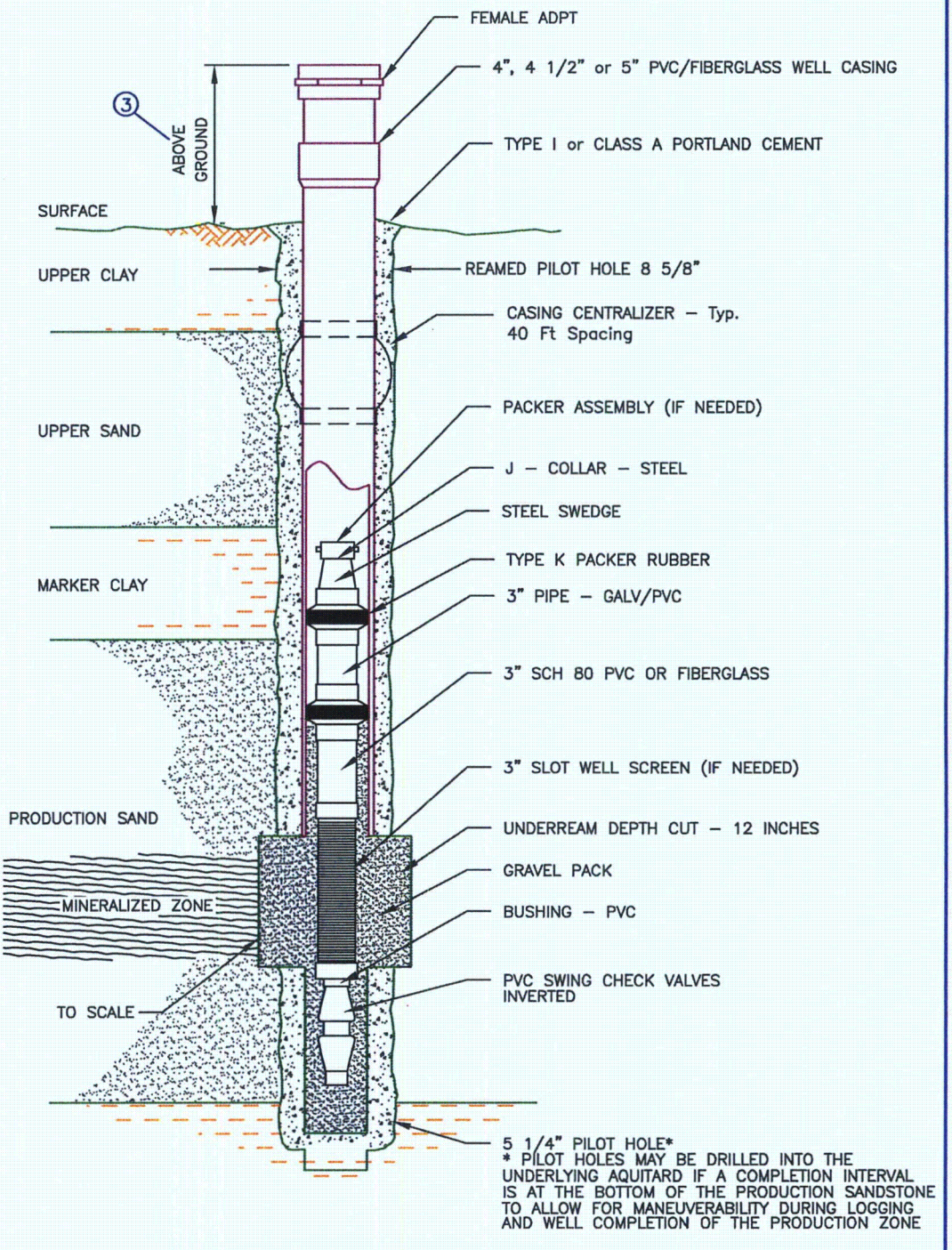

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FIGURE 3-13 NICHOLS RANCH & HANK ISR PROJECTS

TYPICAL PRODUCTION (INJECTION/RECOVERY) WELL DIAGRAM

JOB NO.	URZ Well Design
DATE:	Sept. 25, 2007
SCALE:	N.T.S.
APPROVED BY:	HA
DRAWN BY:	CB, JDN
DRAWING NO.	Figure 3-13

REV.	DATE	DESCRIPTION
1	3/10/08	
2	08/09	
3	7/11/13	SMF
4	10/30/14	LSG

5.0 OPERATIONS

Operations at the Nichols Ranch ISR Project site and facilities are conducted in conformance with applicable laws, regulations and requirements of the various Federal and State regulatory agencies. The organization and management controls described below are established to ensure compliance and further implement the company's policy for providing a safe working environment including the philosophy of maintaining radiation exposures as low as is reasonably achievable (ALARA).

5.1 ORGANIZATION

The management structure and responsibilities of the Uranerz Energy Corporation (Uranerz) organization are described in the following section. The organization function is to provide for development, review, approval, implementation, and adherence to operating procedures, radiation safety programs, environmental and groundwater monitoring programs, quality assurance programs, routine and non-routine maintenance activities, and changes to any of these programs or activities.

5.1.1 Management

The Uranerz organization management structure is shown in Figure 5-1 (see map pocket). The structure is applicable to site construction and site management. The structure is applicable to the central processing facility and the satellite facility. The responsibilities and authorities are described below for these management positions.

A Safety and Environmental Review Panel (SERP) will be established, in whole or part, from these management positions. The SERP is described in Section 5.2.

Chief Executive Officer

The Chief Executive Officer (CEO) has the overall responsibility and authority for the radiation safety and environmental compliance programs. The CEO is responsible for ensuring that operations are compliant with applicable regulations and permit/license conditions. The CEO is also responsible for maintenance of the license. The CEO provides for direct supervision of the Chief Operating Officer.

Chief Operating Officer

The Chief Operating Officer (COO) reports to the CEO and is directly responsible for all production activity at the site. In addition to production activities, the COO is also directly responsible for ensuring that operations personnel comply with and implement industrial and responsible for radiation safety, and environmental protection programs. The COO is also responsible for compliance with all federal and state regulations, license conditions, and reporting requirements. The COO has the responsibility and authority to terminate immediately any activity that is determined to be a threat to employee or public health, the environment, or potentially a violation of state or federal regulations. The COO directly supervises the Mine Manager and other Vice Presidents.

Mine Manager

The Mine Manager reports directly to the COO. All site operations, maintenance, construction, environmental health and safety, and support groups report to the Mine Manager. The Mine Manager is authorized to implement immediately any action to correct or prevent hazards. The Mine Manager has the responsibility and the authority to suspend, postpone, or modify, immediately if necessary, any activity that is determined to be a threat to employee or public health, the environment, or potentially a violation of state or federal regulations.

Line Management

Line management reports directly to the Mine Manager. Line management is responsible for management oversight and direct supervision of activities including construction, operations, maintenance, and support for the respective functional area. Line management is responsible for line implementation of industrial and radiation safety, and environmental protection program

requirements associated with the respective functional area. Line management is responsible for line conduct and enforcing compliance with management controls (e.g. operating procedures, radiation work permits, and ALARA requirements within the respective functional area). Line management has the authority to stop any activity, immediately if necessary, that is determined to be a threat to employee or public health, the environment, or a potential violation of state or federal regulations. Line management oversees all wellfield, production, and lab personnel.

Vice President Regulatory and Public Affairs

The Vice President Regulatory and Public Affairs reports directly to the COO. The Vice President Regulatory and Public Affairs is responsible to oversee the preparation and submittal of permit and license applications to pertinent regulatory agencies. This position supports the Manager Environment, Safety, and Health (ESH) as a resource and ensures permit conditions, agency responses, and regulatory notifications are met. The Vice President Regulatory and Public Affairs also has the responsibility to advise senior management on matters involving radiation safety and to implement changes and/or corrective actions involving radiation safety authorized by senior management. The Vice President Regulatory and Public Affairs is tasked to ensure that the environmental and radiation safety programs are conducted in a manner consistent with regulatory requirements. The Vice President Regulatory and Public Affairs has no production-related responsibilities.

Manager Environment, Safety, and Health

The Environmental, Safety, and Health Manager, reports directly to the Mine Manager, and indirectly to the Vice President Regulatory and Public Affairs. This position has the responsibility and authority for, environmental, occupational safety and radiation safety programs, ensuring compliance with all applicable regulatory requirements. This position assists in the development and review of radiological and environmental sampling and analysis procedures and is responsible for routine auditing of the programs. The Manager ESH has no production related responsibilities. As such, the Manager ESH has the responsibility and authority to suspend, postpone, or modify any activity that is determined to be a threat to employees, public health, the environment or potentially a violation of state or federal

regulations. Additionally, this position could fulfill the duties of the RSO on an interim basis. If required to fulfill RSO duties, the position will meet the requirements of the NRC Regulatory Guide 8.31 for the RSO.

Radiation Safety Officer

The Radiation Safety Officer (RSO) reports directly to the Manager ESH. The RSO is responsible for conducting the radiation safety program and for providing assistance in ensuring compliance with NRC regulations and license conditions applicable to worker health protection. The RSO is responsible for overseeing the day-to-day operation of the radiation safety program and for ensuring that records required by NRC are maintained. The RSO has the responsibility and the authority to suspend, postpone, or modify, immediately if necessary, any activity that is determined to be a threat to employee or public health, the environment, or potentially a violation of state or federal regulations, including the ALARA program. The RSO has no production-related responsibilities. As such, the RSO has an indirect line to the Vice President, Regulatory and Public Affairs. The RSO supervises the Radiation Safety Technician(s).

Environmental Supervisor and Environmental and Radiation Safety Technicians

The Environmental Supervisor reports directly to the Manager ESH. The Environmental Technicians report to the Environmental Supervisor. The Radiation Safety Technicians report to the RSO. The Environmental Supervisor, Environmental Technicians and Radiation Safety Technicians assist the Manager ESH and the RSO with the implementation of the environmental monitoring and radiation safety programs. The Environmental Supervisor and Environmental and Radiation Safety Technicians are responsible for the orderly collection and recording of all data from environmental and radiological safety programs. The Environmental Supervisor and Environmental and Radiation Safety Technicians have no production-related responsibilities.

5.1.2 ALARA

The radiation safety and environmental programs at the Nichols Ranch ISR Project site will be implemented in the context of keeping personnel and environmental exposure to radiation and radioactive material as low as is reasonably achievable (ALARA).

5.1.2.1 Philosophy

The considered purpose of the radiation safety and environmental protection programs at the Nichols Ranch ISR Project site are to maintain exposure to radiation and radioactive materials ALARA for all employees, contractors, visitors, and the environment. The implementation and effectiveness of a successful ALARA program is the responsibility of everyone involved in conducting operations at the site.

5.1.2.2 Responsibilities

Responsibilities for implementation of the ALARA philosophy are shared by management, the RSO, and all workers at the Nichols Ranch ISR Project site.

Management

Management is responsible for developing, implementing, and enforcing the policies and procedures necessary for effective radiation safety, environmental protection, and ALARA programs to ensure the health and safety of workers and visitors, and protection of the environment.

Management will provide the following:

1. A strong commitment to and continuing support for the development and implementation of the radiation safety, environmental protection, and ALARA programs;
2. Information and policy statements to employees, contractors, and visitors.
3. Periodic management review of operational and procedural efforts to maintain ALARA;
4. Continuing management evaluation of the radiation safety and environmental protection programs including staffing, and allocations of space and funding; and
5. Appropriate briefings and training in radiation safety, environmental protection, and ALARA concepts for all employees, and, when appropriate, for contractors and visitors.

Manager ESH and RSO

The Manager ESH and the RSO have primary responsibility for the technical adequacy and correctness of an ALARA application for the environmental protection and radiation safety programs. Each has continuing responsibility for surveillance and supervisory action in the enforcement of the ALARA program.

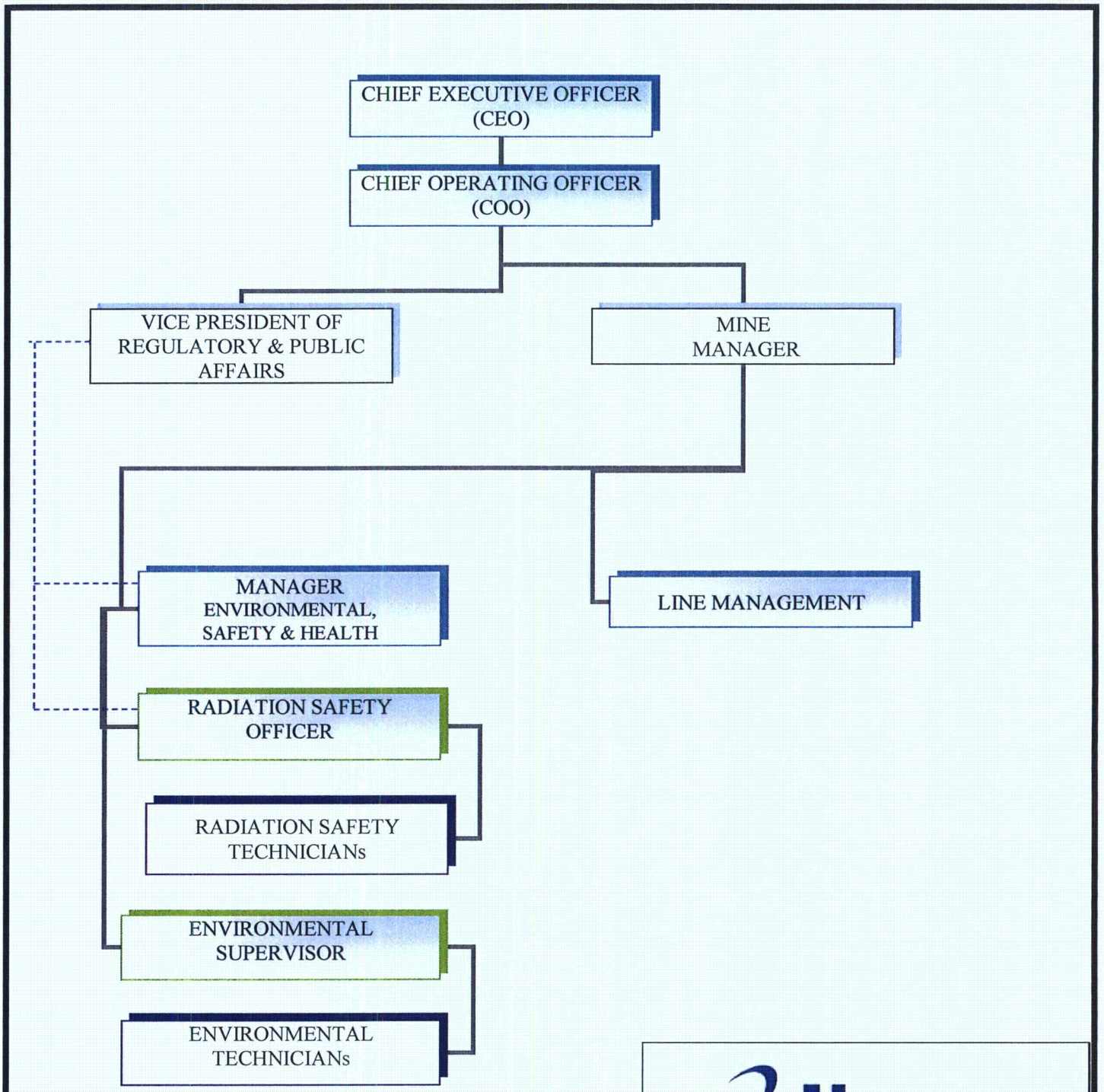
The Manager ESH and the RSO will be assigned the following:

1. Major responsibility for the development and administration of the environmental protection, radiation safety, and ALARA programs;
2. Sufficient authority to enforce regulations and administrative policies that affect any aspect of the environmental protection and radiation safety;
3. Responsibility to review and approve plans for new equipment, process changes, or changes in operating procedures to ensure that the plans do not adversely affect the environmental protection and radiation safety programs; and
4. Adequate equipment and facilities to monitor relative attainment of the ALARA objective.

Workers

Environmental protection, radiation safety, and ALARA programs are only as effective as the workers' adherence to the program. All workers at the Nichols Ranch ISR Project site will be responsible for the following:

1. Adhering to all policies, operating procedures, and instruction for environmental protection and radiation safety as established by management;
2. Reporting promptly to management equipment malfunctions or violations of standard practices or procedures that could result in increased radiological hazard;
3. Suggesting improvements for the environmental protection, radiation safety, and ALARA programs.



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NICHOLS RANCH ISR PROJECT

FIGURE 5-1

URANERZ ORGANIZATION

BY: Dalton Timm	DATE: OCTOBER 29, 2007
CONTOUR INTERVAL: N/A	REV. DATE: March 4, 2015
SCALE: N/A	REV. #: 3
FILE LOCATION: t:\it\drafting\nichols ranch\permitting-licensing\figure 5-1 REV-.doc	

7.2.5.2.8 Raptors

One hundred forty one raptor nests occur within the **Nichols Ranch, Hank, and Jane Dough** wildlife study area. Based on the proposed permit boundaries, those trees with nests will not be removed during project activities. The principal impact to these nests from project activities and associated increased human access is potential disturbance during nesting, which could result in nest abandonment and decreased reproduction success. **Uranerz will comply with seasonal disturbance restrictions and requirements by the USFWS.** Potential conflicts between active nest sites and project-related activities will be mitigated by annual raptor monitoring and mitigation plans such avoiding areas, when possible, where raptor nest sites are located, and limiting the constructing of overhead power lines so that raptors will not come in contact with them or use them as perches for viewing prey such as sage-grouse.

The temporary disturbance of approximately **401** acres of raptor prey species habitats is unlikely to result in a reduction in the raptor population in the area because only 60-80 acres will be disturbed at any time. Additionally, this reduction is expected to be short-term and negligible. Therefore, the Nichols Ranch ISR Project is not expected to have any adverse long-term impacts on raptor populations.

7.2.5.2.9 Nongame/Migratory Birds

The temporary disturbance of approximately **401** acres of habitat will result is some reduction in the carrying capacity for nongame/migratory birds within the project area. Birds may be displaced by the mining activities and the temporary disturbance of wildlife habitat; however, the amount of habitat lost will be minimal in relation to the amount of comparable habitats that are available in the general area. Therefore, the Nichols Ranch ISR Project is not expected to have any adverse long-term impact on any passerine bird populations.