General Comments

1. Please identify with chemical characteristics, amounts generated, points of generation, points of accumulation of all hazardous and non-hazardous solid waste streams predicted to be produced from any aspect of operation of the facility. Usually, this is covered under a Pollution Prevention Plan.

2. Please provide a plan drawing of all process and other piping conveying all process fluids, fuels, chemicals, and wastes including lines to pond system outside of secondary containment or buildings. Include any recycle and/or return lines. Please prepare a table of this piping including chemical characteristics of materials conveyed, material of construction, inside diameters, method of joining, wall thickness, length outside building/secondary containments, support info or burial depth, line flow capacity and anticipated average/max flows. If corrosion due to composition is possible provide information on corrosion protection (cathodic or otherwise) to be provided. For buried piping, are these soils prone to causing corrosion? Following review of this information, the Division may require some form of double containment for some lines or if the license applicant has alternative suggestions, the Division will review those if provided.

3. Re comment 2 of this section, the Division is very concerned about possible spills and releases to the soil inside of process buildings/secondary containment areas but also exterior to those areas due to leaks and pipeline failures of wastes, and process fluids, and fuels/chemicals. A separate QA/QC plan for each category of all concrete foundations and slabs per process building, all secondary containments including epoxy surface coatings, exterior to buildings field-erected storage tanks, piping outside of secondary containments and process buildings, 1 acre and 5 acre ore pads, ore dumping platform, stormwater conveyance pipeline and East/West Stormwater ponds including inlets and outlets, tailings cells, and evaporation ponds.

4. Please provide a HAZOP analysis of all pipelines, valves, controls, etc of equipment that could potentially cause a release outside of a secondary containment area or process building or into an exterior secondary containment area including but not limited to pumps, controls, valves, etc and to lines to/from tailings cells and evaporation ponds, and exterior located storage tanks.

5. All exterior storage tanks need to have high-high tank level sensors and alarms to control.

1 acre Ore Pad Design (includes drawing and specs)

1. license applicant has demonstrated adequate support for localized maximal loads for the steel-reinforced concrete 1 acre ore pad. Additional distributed loads due to ore piles should not be a concern. The nature of concrete is to crack over time. Joints allow for constructability and give some places for cracks to align to. Ore runoff can exit the concrete pad through developed cracks to underlying soils for infiltration prevention purposes. EF mentions a crack inspection, repair, and maintenance as a routine practice in numerous locations in the application. This should be formalized into a Division-approved pan. An alternative approach to this plan which provides an

additional level of groundwater protection/soils contamination prevention is to design a HDPE (High Density Polyethylene) liner w/collection system under the concrete such that even if the concrete cracks (which it eventually will), the infiltrated water and any particulates will be isolated and collected at sumps for recycle to process. Standard HDPE welding techniques and QA/QC apply. Note, that for the crack inspection, repair, and maintenance plan to be a viable replacement for the HDPE liner, the plan must be significantly robust. Please provide the plan or the HDPE liner design.

2. Construction and other crack control joints will be fitted with cast-in-place continuous waterstop. Please add this to all applicable drawings as depictions and notes for the 1 ac ore pad. Note, that this requirement could be alleviated through the use of the HDPE liner as mentioned above.

5 ac Ore Stockpile Pad Design (includes drawings, specs, and Attachments A – D)

1. Re Cushion Material Thickness Summary Sheet – The assumed 8 psi maximal stress was probably derived from the GCL vendor's information or from an additional GCL design reference. Please provide the information source to include in Attachment A as supporting documentation to the assumptions used in the calculations. Cushion pad composition of upper roadbase and lower on-site derived compacted fill is acceptable.

2. Comment 2 – Re Cushion Material Thickness Summary Sheet – the use of the specified articulated Cat 988H Wheel Loader, due to derived loading calculations for the cushion material thickness, will be stipulated in the license. The license applicant will be allowed to use alternative make/model same-type (articulated wheel loader) loading/moving equipment provided license applicant provides an acceptable demonstration that the loading is equivalent to or less than the Cat 988H.

3. Comment 3 – Re Cushion Material Thickness Summary Sheet – It is assumed that the Cat 988H provides the greatest loading to pad. If side dump units are allowed onto the pad due to southeast access ramp to pad and language in text that says side dump equipment could be used also, is the 988H still the limiting factor for design purposes? Please demonstrate this by providing information on heaped side loading units to be used, specifically maximal wheel load pressure for comparison along with the calculation.

4. Re GCL placement – will they be butted end-to-end and edge-to-edge or will they be overlapped? A description of the installation procedure is needed. What is the on-site QA/QC plan for acceptance and installation of the GCL mats?

5. Comment 5 – Re Cushion Material Thickness Attachment B Calculation Spreadsheets – The chosen 3.5 foot cushion thickness with a computed vertical stress of 7.7 psi generates a very tight design 7.7/8.0 = 96.3% of maximal allowed vertical stress or 3.7% remaining of the maximal allowed 8.0 psi as a FOS. If as is shown in the adjacent column of the spreadsheet, 4 foot thickness is chosen, a 5.9 psi vertical loading is computed with a resulting FOS of 5.9/8.0 = 73.8% 100 – 73.8 = 26.2%, which is significantly greater than 3.7%. The condition of the underlying GCL mats is highly important for infiltration prevention purposes especially in the long term. It is the Division's opinion, that a four foot cushion thickness should be used and the applicable portions of the application need to be revised. With an intended design life of 40 years, it would appear that GCL longevity is an important factor.

6. Comment 6 – Technical Specifications, Section 02200.0 Earthworks, C. Cushion Material, p.9 - 10 of 13 Spec 1 at 15 inches/lift conflicts with spec 4 at 12 inch max lift. Please amend spec.

7. Comment 7 - Technical Specifications, Section 02200.0 Earthworks, C. Cushion Material, p.9 - 10 of 13 Spec 3 spreading of cover lift is to be by "…equipment that minimizes stress on the GC". Please specify what this equipment will be e.g low ground pressure dozer, etc.

8. Comment 8 - Technical Specifications, Section 02200.0 Earthworks, C. Cushion Material, p.9 - 10 of 13 Spec 5 "Cover materials with high concentrations of calcium (e.g., limestone, dolomite) are not acceptable." Please define specifically cutoff concentration or refine this definition further. This requirement is to delay the substitution of calcium ions for sodium in the bentonite GCLs. Under the proposed use scenario, what is the projected life of the GCLs? Please provide discussion and reference information/data.

9. Comment 9 - From the Division's perspective, it would appear that a composite (HDPE) liner would have a significantly longer lifespan which would be a better match for these mills that have long lifespans including extended periods of inactivity owing to market conditions. Please demonstrate that the lifespan of the GCL liner is equivalent to a HDPE liner as well as being as protective. The Division is concerned with the GCLs surviving for long periods under intense contact loads from vehicles that will cause the GCLs when they become wet to deform and squirm away from the tires (rutting) and over time not perform the liner function as well as fail to provide load support.

10. Comment 10 - Technical Specifications, Section 02200.0 Earthworks, C. Cushion Material, p.9 - 10 of 13 Spec 6 Please add a sentence to this spec that stipulates cushion material will be placed in a straight line (e.g. no turns) manner to prevent transmittal of shear forces to underlying GCL mats.

Ore Dumping Platform

1. Please provide the Hilfiker retaining wall design calculations.

2. Comment 2 – What is the projected lifespan of the shotcrete facing? Please provide a maintenance and inspection plan for this facing including replacement/maintenance criteria.

3. From the Division's review of the ore dumping platform, it would appear that the intent is to have end dumps utilize the platform exclusively over side dump units? Please confirm.

4. From the design, haul vehicles (side dumps) entering the 5 acre ore pad exit through a truck decon station before leaving the site. With the ore dumping platform design, the haul vehicles can exit the site without being decontaminated. Will the haul truck loads be struck or heaped? Dust from the dumping operation and any spillage over time will result in the ore dumping platform being gradually contaminated. Consequently, the ore dumping platform should be lined and surface drainage collected.

5. How Please provide design drawings for the dust suppression system

Sediment Trap

1. Need design drawings including details with cross sections and supporting calculations and assumptions for sediment trap (include cleanout criteria, e.g. when, disposal/recycle, etc) adjacent to East Stormwater Pond. Please provide discussion as to function in relation to ore pad run-off and truck decon station.

2. Need truck decon station(s) design (inlets and outlets also), anticipated volumes of water/flow to sediment trap and hence to East Stormwater Pond and cleanout criteria.

3. Re Liner Details Sheet 2 of 2 Drawing 7, details (options) 1A and 1B, transition to concrete sediment trap. These alternative designs are for HDPE liner to concrete attachment. HDPE has a significant coefficient of expansion. How will this be allowed for in regards to these options to prevent tear-out when cold and excessive loose folds when temperatures are warm?

East and West Stormwater Ponds

1. Re Drawing No.5 East Stormwater Pond Layout, Sections, and Details, C5 Weir Box Section C to C'– Provide attachment tie-in detail for 30 inch HDPE outlet pipe to concrete weir box.

2. With 3:1 sloped sides, it should be stipulated in the license that the two long sides should each have a minimum of one roughened panel to aid egress in the event of accidental personnel immersion. Repeat the requirement for West Stormwater Pond.

3. Please provide inspection, repair, and maintenance plan for all HDPE channel and pond liners.

4. While these stormwater ponds (east and west) do collect stormwater, they also reflect contact with ores and ore-derived dust as well as occasional vehicular fluid spills due to leaks of diesel fuels, lubricants, and radiator, transmission, and hydraulic fluids. As such, they may contain heavy metals, PAHs (poly aromatic hydrocarbons), and semi-volatile organics besides uranium ore derivatives. The ponds are designed with a 60 mil HDPE primary liner with an underlying GCL secondary liner in direct contact. While the double liner provides some assurance of leak protection, it does not afford a way of ascertaining when a leak has occurred in the primary liner. A leak detection system in between the layers will provide a way of monitoring for leaks of the primary liner. Please provide a revised design with appropriate drawings that reflect the addition of a leak detection system.

5. Provision for removing and disposition of collected solids in the stormwater ponds needs to be addressed.

6. Comment 6 – Re Volume 1, Surface Drainage Section, Site Drainage Analysis and Design Report, Appendix C East Stormwater Pond, sheet 28 of 43, Detail B, Bubble Note states "this was eliminated based on final site grading". The channel entrance is depicted on the same sheet as Detail A. How is the water routed into the pond given the channel from the sediment trap if the entrance is eliminated? Also, see sediment trap request for design information above.

Stormwater Ponds Overflow System Pipeline – Technical Specifications, Spec 6.04.03 Polyethylene Pipe and Fittings, p.8 of 11 and Drawings C2, C10, and C11

1. For the 30 inch HDPE line from east and west stormwater ponds directing water to evaporation ponds, there is no mention of QA/QC for butt welding the sections of pipe together.

2. Please verify there are no perforations specified in this piping (30 inch stormwater line)?

3. Re Drawing C16, Impact Basin Detail/Section L, the impact basin is to be constructed of concrete, please provide a steel reinforcement schedule with placement.

4. Re Drawing C16, Impact Basin Detail/Section L, how will the 36 inch HDPE be tied into the concrete?

5. Please provide a typical manhole cross section detail that shows construction and HDPE pipe tie in on entrance and exit.

6. Please provide a cross section parallel to the pipe at the point where the stomwater pipe passes under the tailings pipe exiting the thickeners to the tailings ponds. Show ground surface and relative elevations of pipe.
7. Please provide plan and cross section construction details (include angle information) on the HDPE pipe junction from each of the ponds. How will this pipe be joined e.g. welded or other?

Water Quality Swale

1. The Division concurs with the license applicant that the inclusion of a water quality swale at the surface water diversion ditch exit prior to entering drainage at Highway 90 reflects good practice in arresting sediment from overland flow and the ditch as well as retarding flow into the Highway drainage. However, as noted on page 8 and depicted on Drawings C7 and C8 of the Site Drainage Analysis and Design Report (Vol1), "Standard design practice and standard details were used to size the swale (flat gradient and side slopes, maximize length) within the topographic constraints available as opposed to a detailed engineering or water quality analysis. As such, no detailed calculations were completed." The Division would like to see a better match of the swale length and other characteristics to the ditch sediment and water carrying capacity. Currently, there is no way to ascertain if the swale will accomplish what it is supposed to do. Please provide an appropriate engineering analysis including the stilling basin design. In addition, please provide a maintenance plan that will address sediment removal. Table of plant species, density and placements will also be part of this submittal. Discuss how the plants will be established with watering schedule over two growing seasons rather than one.

Stormwater Diversion Berms

1. Re Drawing C16 Typical Cross Sections, Sections A – E, how will the unarmored portions of the berms be protected from erosion? Maintenance plan discussion needs to be provided.

Topsoil Storage Pile

1. EF states the topsoil stockplile will rely on vegetation to avoid erosion during the operational phase of the facility. The Division believes that more active management will be required until the vegetation is established and the stockpile needs to be part of routine inspection and maintenance.

Area 100 Drawings:

100-GA-001 Ore Handling & Grinding – Ore Reclaim and Convey. Plan
100-GA-002 Ore Handling & Grinding – O R & C Section A-A
100-GA-003 Ore Handling & Grinding – Pulp Storage & Pre-Leach Plan
100-GA-004 Ore Handling & Grinding – P S & P – Sections A-A, B-B, C-C
100-PFD-001 Area 100 Process Flow Diagram

1. Standby Generator w/Day Tank – Is day tank the equivalent of fuel tank? What is fuel type? Does tank have secondary containment? Is containment volume $\geq$ 110% of day tank? Continuous waterstop present for all joints in secondary containment? Calculation sheet for secondary containment needed. Include dimensions of day tank and volume.

2. Diesel Storage - Calculation sheet needed for secondary containment volume for each separate tank or largest tank in a group of tanks. Calculations including dimensions, reference to particular drawing(s) used to derive information, volumes of tank bases, equipment piers etc that reduce available volume and formulas used. Include sump and trench volumes. Compare to tank volume to show 110% of largest tank for interior tanks e.g. under cover or 110% plus 5 yr 24 hr storm volume for exterior located tanks. Calculation sheet should be stamped by Colorado Licensed Professional Engineer.

3. Tank Data & Secondary Containment Volume Summary Table needed. Headings should be: Tank Number& Title (one of # if same size group), Plan and Side Elevation Reference Drawing Titles, Interior or Exterior Located, Tank Construction (ex field-erected welded carbon steel), Wall Thickness (range top to bottom in feet if variable), Bottom Thickness (feet), Dimensions (feet), Presence of High-High Alarms and set level (feet) if present, Tank Volume (cubic feet), Secondary Containment Volume (cubic feet), Associated Calculation Sheet Number. Please include curb heights and elevations.

4. Need to provide concrete foundation and slab designs and detail drawings depicting rebar plan (locations and sizes), construction, expansion, and slab-to-wall and slab-to-curb joints, sumps, trenches and concrete slab slopes. Also provide cross sections through each slab and detail sections through sumps. Include all waterstop details (continuous, flexible dumbbell type is strongly suggested).

5. Concrete Secondary Containment: Construction joint, expansion joint, wall/curb joint locations on diagrams and detail scaled and dimensioned cross section of each joint type showing fixed and sliding rebar and size, base, concrete, waterstop dimension and type, surface coating compatible w/chemicals in that area. Detail scaled and dimensioned cross section through each sump is required unless each will have same construction in which case a typical may be used.

6. Epoxy coat inside of secondary containment surfaces, provide drain grooves from under tanks on concrete tank pads.

7. Please provide concrete slab construction for coarse ore feed hopper and SAG mill including rebar design, joint placement, continuous waterstop locations etc for floor and floor to curb joints, and sump construction.

8. Also, please provide capacity of sump pump and verify that it is alarmed for non-function to control. Provide where in the process the sump pumps discharge or recycle.

9. Pulp Storage and Pre-Leach area, please provide info in comments 2 – 7 above for this area.

10. Re Coarse Ore Feed Dust Collection Baghouse – Please provide details such as manufacturer, type, flow capacity, number of bags, pulsed or shaken, breakthrough detection, efficiency, minimum size particulate collected, etc. Vendor info is acceptable.

11. How will trommel discharge hopper solids (oversize) be transported to tailings cell(s)?

Area 200 Drawings

200-GA-001 Grinding and Leach Building Plan
200-GA-002 Grinding and Leach Building Section A-A
900-GA-001 Grinding and Leach Building Plan
200-PF-001 Area 200 Pre-Leach Process Flow Diagram
200-PF-002 Area 200 Leach Train Process Flow Diagram

1. Repeat comments 3 - 6 for area 100 for this area.

2. Please provide concrete slab construction grinding and leach building including rebar design, joint placement, continuous waterstop locations etc for floor and floor to curb joints, and sump construction.

3. Please provide capacity of sump pump(s) and verify that they are alarmed for non-function to control. Provide where in the process the sump pumps discharge or recycle.

4. What are the emissions coming off the leach tanks that report to this scrubber? The unit should be on secondary containment and could be part of the leach tanks' secondary containment. A maintenance, inspection, and monitoring plan will need to be developed.

Area 300 Drawings

300-GA-001 CCD and Tailings Disposal CCD Thickeners Area
300-GA-002 CCD and Tailings Disposal CCD Thickeners Area Sect A-A B-B
000-GA-002 General Plant Area - Process Plant Area – Key Plan
300-PF-001 Area 300 CCD Thickeners Process Flow Diagram
300-PF-002 Area 300 Tailings Area Process Flow Diagram

1. Repeat comments 3 -6 of area 100 for this area.

2. Please provide concrete slab construction for the CCD and tailings disposal building including rebar design, joint placement, continuous waterstop locations etc for floor and floor to curb joints, and sump construction. Also, please provide capacity of sump pump(s) and whether they are alarmed for non-function to control.

3. Please provide the capacity of tailings pumps and verify that they are alarmed for non-function to control. Provide where in the process the sump pumps discharge or recycle.

4. Please provide details including a scaled cross section on the two tailings pipes and trench. Provide details on dimensions, materials of construction, how attached, supports, etc. What measures have been taken to prevent leaks and pipe failures at joints?

Area 400 and 600 Drawings 400-GA-001 Uranium Solvent Extraction Building – West U SX Plan
400-GA-002 Uranium Solvent Extraction Building – West U SX Sc A-A B-B
600-GA-001 Vanadium Oxidation and Solvent Extraction Building – East
600-GA-002 Vanadium Oxidation and SX Bldg – East Sect A-A & B-B
600-GA-002 Vanadium Oxidation and SX Bldg – East Sect C-C & D-D
400-PF-001 Uranium SX – Feed System and Extraction Train A PFD
400-PF-002 Uranium SX Extraction Train B Scrub and Strip PFD
600-PF-001 Vanadium Oxidation and SX Extraction Train A PFD
600-PF-002 Vanadium Oxidation and SX Extraction Train B PFD
000-GA-004 Uranium and Vanadium SX Building Plan

1. Repeat comments 3 -6 for area 100 for this area.

2. Please provide concrete slab construction for the uranium and vanadium solvent extraction building including rebar design, joint placement, continuous waterstop locations etc for floor and floor to curb joints, and sump construction.

3. This portion of the building serves to hold two different process areas: Area 420/430 Uranium Extraction Train A and B respectively along with Uranium SX Raffinate Tank, Uranium SX loaded Organic Tank, Uranium SX Barren Organic Tank, Crud Centrifuge w/ assoc Crud Solids Disposal Hopper and Crud Aqueous and Crud Organic Tanks; Uranium SX Feed Tank (appears to have own secondary containment outside building); Area 640 Vanadium Scrub, Strip & Regen; Area 620/630 Vanadium Extraction Train A and B respectively w/ additional Vanadium Oxidation Circuit tanks; and Vanadium SX Feed Tank (also appears to have own secondary containment outside building. The building does not have a containment system. This is a requirement. An approach for this building would be to divide the Uranium Process area from the Vanadium Process area with curbs to prevent mixing in the event of process leaks, spills, or tank failures. This would also facilitate separate sumps in these two areas for collection and recycle of the fluids. As an alternative, the two process fluids can be collected together, the building then being treated as a single containment. The Uranium SX and Vanadium SX Feed Tanks already appear to have secondary containment as noted previously. The required

containment volume for outside storage is 110% of the largest tank plus the volume of the area 5 year 24 hour precipitation event.

4. Please provide sump pump capacities and whether they are alarmed for non-function to control. Provide where in the process the sump pumps discharge or recycle.

5. Please provide a detail on the raffinate entry pipe(s), discharge manhole and buried pipe sleeve giving but not limited to materials of construction, dimensions, attachments, etc.

6. Please provide a detail and cross section of the pipe and trailing trench where it enters the trench.

7. While recognizing that this facility is not a RCRA regulated facility, we are still concerned about the chemical composition and concentrations (vanadium, metals, and organics) of the vanadium SX raffinate to be sent to tailings cells and evaporation ponds. EF has provided an estimate of the raffinate from the uranium circuit, but not the vanadium circuit. Could the vanadium raffinate be recycled into process and if not, why? Ideally, the waste discharged to the tails should be as environmentally innocuous as possible.

8. What is the disposition of the liquids in the crud aqueous and crud organic tank? Recycle?

9. How are crud centrifuge solids transported to tailings cell(s)?

Area 500 Drawings

500-GA-001 Precipitation and Packaging Building Area Plan
500-GA-002 Precipitation and Packaging Bldg Drying & Packaging Plans
500-GA-003 Precipitation and Packaging Bldg Drying & Packaging Plans
500-GA-004 Precipitation and Packaging Bldg Drying & Packaging Sc A-A
500-GA-005 Precipitation and Packaging Bldg Drying & Packaging Sc B-B
500-GA-003 Precipitation and Packaging Bldg Precip & Thickening Sc A-A
500-PF-001 Uranium Precipitation, Drying and Packaging PFD
500-PF-001A Uranium Filtering and Drying PFD
700-PF-001 Vanadium Precipitation PFD
700-PF-002 Vanadium Drying and Packaging PFD
000-GA-005 Area 700 Precipitation and Packaging Building Plan

1. Repeat comments 3 - 6 for area 100 for this area.

2. Please provide concrete slab construction for the precipitation and packaging building including rebar design, joint placement, continuous waterstop locations etc for floor and floor to curb joints, and sump construction. There are several secondary containment areas indicated on the drawings.

3. Please provide capacity of sump pump(s) and verify that they are alarmed for non-function to control. Provide where in the process the sump pumps discharge or recycle.

4. Secondary containment is required in the uranium belt filter and associated equipment as well as the wet scrubber. See comment #2 in this section.

5. Secondary containment is required in the vanadium steam dryer and belt filter area and under vanadium precipitation tanks 2 - 4 as well as the wet scrubbers. See comment #2 in this section.

6. How will dust generation be controlled at the uranium feed hopper and downstream of the vanadium fusion furnace through the vanadium product feed hopper?

7. Stacks for the uranium and vanadium vent gas scrubber stacks will be monitored for emissions. What are the emissions (uranium and vanadium and any accessory) and their expected maximum concentrations at these points?

8. Re 500-PF-001A, where does exhaust gas from uranium pump after condenser report to in the yellow cake room (Area 400?)?

Area 800 Drawings

800-GA-001 Reagents Unloading - Unloading Building Plan
800-GA-002 Reagents U & Storage - Outside Bulk Storage Tanks
800-PF-001 Sulfuric Acid, Ammonia, and Ammonium Sulfate PFD
800-PF-002 Sodium Hydroxide and Sodium Carbonate PFD
800-PF-003 Flocculant and Organics PFD
800-PF-004 Sodium Chlorate and Hydrogen Peroxide PFD

1. This comment was provided earlier but is repeated here from completeness review. In the reagents unloading area there are two oxidizers (hydrogen peroxide and sodium chlorate) located where a spill or release could cause them to come into contact with diesel fuel oil or kerosene potentially causing fire and/or explosion. The fuels should be on a separate pad away from the oxidizers.

2. Where does the sulfuric acid sump pump send flow to? This sump should be coated with an acid resistant coating.

3. Sulfuric Acid Storage Area should have an acid resistant coating on the inside of the concrete secondary containment.

4. Is there provision to prevent backing of transport tankers from colliding with valve assemblies and is there feedback from the intended storage tank to the operator that the fill point has been reached?

5. Repeat comments 3 - 6 for area 100 for the kerosene and sulfuric acid storage areas.

6. Re 800-PF-003 what specifically are the alcohol, amine, and organic chemicals?

Area 900

900-GA-002 Steam Boiler Building Plan
900-PF-001 Water Storage PFD
900-PF-002 Boilers and Compressors PFD
900-PF-003 Fuel Storage PFD

1. There is a deaerator unit for the boiler feed water. Are any other chemicals to be used in the boilers such as anti-scaling agents, anti-corrosives, or any other treatment chemicals?

2. Will there be any vanadium in the water derived from the casting water wheel that will be used as fire water supply?