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From: Steve Christensen
To: cjohnsto@osmre.gov
CC: Daron Haddock; Jim Smith; John Gefferth; OGMCOAL
Date: 10/8/2009 2:23 PM
Subject: Emery Deep Federal LBA- DOGM Findings
Place: OGMCOAL
Attachments: DOGM Findings Document.pdf

Carl,

As we discussed, I've gone ahead and scanned our findings documents and attached it. There are three documents in the .PDF file: a punch-list document, the technical analysis and the AVS search results.

Call me if you have any questions or need more information from the Division.

Thanks for your help Carl.

Regards,
Steve

Steve Christensen
Environmental Scientist III
Utah Division of Oil, Gas and Mining
(801) 538-5350

FINDINGS

Consolidation Coal Company
Emery Deep
C/015/0015
Emery County, Utah

October 8, 2009

1. The Division finds that the application to revise the approved Emery Deep Mining and Reclamation Plan (MRP) to expand mining operations into Federal Lease UTU-86038 is accurate and complete and all requirements of the Surface Mining Control and Reclamation Act, and the approved Utah State Program (the "Act") are in compliance. See Technical Analysis dated October 7th, 2009 (R645-300-133.100)
2. Per R645-301-133.710, the applicant must demonstrate that reclamation as required by the State Program can be accomplished according to information given in the permit application. As the proposed mining expansion into Federal Lease UTU-86038 does not call for any additional surface disturbance, R645-301-133.710 does not apply.
3. Per R645-301-133.400, an assessment of the probable cumulative impacts of all anticipated coal mining and reclamation operations on the hydrologic balance in the cumulative impact area has been conducted. The Cumulative Hydrologic Impact Assessment (dated March 16th, 2007) examined the proposed area of expansion and the potential for mining related impacts on hydrologic resources. The Division finds that the proposed operation and expansion of mining into Federal Lease UTU-86038 has been designed to prevent material damage to the hydrologic balance outside the permit area.
4. The lands to be mined within the proposed expansion into Federal Lease UTU-86038 are:
 - a. Not included within an area designated unsuitable for underground coal mining operation (R645-300-133.220);
 - b. Not within an area under study for designated land unsuitable for underground coal mining operations (R645-300-133.210);
 - c. Not on any lands subject to the prohibitions or limitation of 30 CFR 761.11 {a} (national parks, etc), 761.11 {f} (public buildings, etc.) and 761.11 {g} (cemeteries);

- d. Are within 100 feet of a public road. However, no coal mining or reclamation operations are proposed within 100 feet of a public road. No additional surface disturbance is proposed within Federal Lease UTU-86038, thus the requirements of R645-300-133.220 are not applicable.
 - e. Not within 300 feet of any occupied dwelling (R645-300-133.220).
5. The operation would not affect the continued existence of any threatened or endangered species or result in the destruction or adverse modification of their critical habitats as determined under the Endangered Species Act of 1973. See Technical Analysis dated October 7th, 2009 (16 USC 1531 et seq.) (R645-300-133.500).
6. The Division's issuance of a permit is in compliance with the National Historic Preservation Act and implementing regulations (36 CFR 800). See Technical Analysis dated October 7th, 2009. (R645-300-133.600)
7. The applicant successfully bid on Federal Lease UTU-86038 and has secured the mineral rights to the coal therein. The Bureau of Land Management recommended initial approval of the applicants Resource Recovery and Protection Plan (R2P2) on October 6th, 2009. The surface of the proposed expansion area is owned privately by the applicant.
8. A 510 (c) report has been run on the Applicant Violator System (AVS), which shows that: prior violations of applicable laws and regulations have been corrected; neither Consolidation Coal Company nor any affiliated company, are delinquent in payment of fees for the Abandoned Mine Reclamation Fund; and the applicant does not control and has not controlled mining operations with demonstrated pattern of willful violations of the Act of such nature, duration, and with such resulting irreparable damage to the environment as to indicate an intent not to comply with the provisions of the Act (A 510 (c) report was run on October 7th, 2009. See memo to file dated October 8th, 2009. (R645-300-133.730)
9. The operations to be performed under the permit will not be inconsistent with other operations anticipated to be performed in areas adjacent to the proposed permit area.

10. As no new additional surface disturbance is proposed with the addition of Federal Lease UTU-86038, bonding revisions/adjustments are not required. (R645-300-134).
11. No lands designated as prime farmlands or alluvial valley floors occur in the proposed expansion area. See Technical Analysis dated October 7th, 2009 (R645-302-313.100 and R645-302-321.100)
12. As the proposed expansion into Federal Lease UTU-86038 does not call for any additional surface disturbance, the pre- and post-mining land use remains unchanged.
13. The Division has made all specific approvals required by the Act, the Cooperative Agreement, and the Federal Lands Program.
14. All procedures for public participation required by the Act, and the approved Utah State Program are in compliance. The proposed expansion into Federal Lease UTU-86038 did not meet any of the criteria that requires public participation/public notice. (R645-300-120)
15. No structures are located within the proposed expansion area. As such, the requirements and performance standards cited in R645-301-133.720 (relative to existing structures) do not apply. (R645-300-133.720)
16. Consolidation Coal Company agrees to pay all reclamation fees as required by 30 CFR Part 870. (R645-300-133.730)



Environmental Scientist



Permit Supervisor



Associate Director

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

October 8, 2009

TO: Internal File

THRU: James D. Smith, Permit Supervisor

FROM: Steve Christensen, Environmental Scientist
Ingrid Wieser, Environmental Scientist

RE: Add Zero Zero North LBA, Consolidation Coal Company, Emery Deep, C/015/0015, Task ID #3411

SUMMARY:

On October 6, 2009, the Division of Oil, Gas and Mining (the Division) received an application from Consolidation Coal Company (the Permittee) to revise the approved mining and reclamation plan (MRP) for the Emery Deep Mine. The application proposes to expand the existing Zero Zero North Panel by 120 acres with the addition of Federal Lease UTU-86038. On September 3rd, 2009, the Permittee was the successful bidder on this tract of coal.

The application for the Zero Zero North expansion was submitted previously on September 17, 2009. The Division completed a technical review of the application (Task ID #3405) and identified deficiencies to be addressed prior to receiving final approval.

The following technical memo examines the application relative to the regulations of the State of Utah R-645 Coal Mining Rules.

Findings:

The Division finds that the application meets the State of Utah R645-Coal Mining Rules and should be approved at this time.

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TECHNICAL ANALYSIS:

GENERAL CONTENTS

PERMIT APPLICATION FORMAT AND CONTENTS

Regulatory Reference: 30 CFR 777.11; R645-301-120.

Analysis:

The application meets the Permit Application Format and Contents requirements of the State of Utah R645-Coal Mining Rules.

The previous technical review (Task ID #3405) had identified areas where further clarification and information was needed. The Permittee has provided clarification within the application so that it's clear to the reader that additional information pertains directly to the lease expansion of the Zero Zero North Panel. Clarification was provided in Section VI.2.4, *Baseline Information* on the top of Page VI-3 and on the top of the 1st page of Appendix VI-16, *Selected Text From Miller Canyon Tract EA* as requested in the previous technical review.

Findings:

The application meets the Permit Application Format and Contents requirements of the State of Utah R645-Coal Mining Rules.

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

GENERAL

Regulatory Reference: 30 CFR 783.12; R645-301-411, -301-521, -301-721.

Analysis:

The application meets the requirements for General Environmental Resource Information requirements as provided for in R645-301-721.

Beginning on page VI-1 of the approved MRP, the Permittee provides descriptions and discussion as to the location and extent of ground and surface water. Plates VI-1 through VI-3 depict the ground water resources within the permit and adjacent areas including the proposed addition to the Zero Zero North Panel. Plate VI-4 depicts water supply wells, ground water monitoring wells as well as the surface and ground water monitoring sites.

Water right information is provided in Appendix VI-4 and Table VI-1. Seasonal variations in groundwater levels are discussed in Section VI.2.4.1. The depths of the wells (as well as other completion details of the wells) are provided in Table VI-2.

The general hydrologic information contained in chapter VI encompasses the proposed expansion of the Zero Zero North panel.

Additionally, the Permittee has submitted the requisite information relative to Historic/Archeological, Biological and Vegetative Resources. (See Discussion Below)

Findings:

The application meets the General Environmental Resource Information requirements as provided for in R645-301-721.

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ALLUVIAL VALLEY FLOORS

Regulatory Reference: 30 CFR 785.19; 30 CFR 822; R645-302-320.

Analysis:

Alluvial Valley Floor Determination

The application meets the Alluvial Valley Floor Determination requirements as provided for in R645-302-320. Chapter XI, *Alluvial Valley Floors*, of the approved MRP contains information regarding alluvial valley floors (AVF's) within and adjacent to the permit area (including the Zero Zero North expansion area). Plate V-5, "*Subsidence Monitoring Points and Buffer Zones*" depicts the locations of the alluvial valley buffer zones established by the Permittee. The proposed expansion to the Zero Zero North Panel is not located within an identified AVF.

Based upon previously submitted information within the approved MRP as well as numerous site visits by Division staff, the Zero Zero North Expansion panel does not meet the criteria of an Alluvial Valley Floor. The surficial geology is predominantly Mancos Shale. Though the area is flood irrigated, the source of the water is approximately 22 miles from the site. In addition, there is no evidence of terraces within or adjacent to the Zero Zero North Expansion area.

Prime Farmland

The application meets the Prime Farmland requirements of the State of Utah R645-Coal Mining Rules.

Based upon site visits by Division staff and the review of existing soil, geologic and hydrologic data, the proposed lease expansion is not located within an area that meets the criteria of Prime Farmland.

Findings:

The application meets the Alluvial Valley Floor Determination requirements as provided for in R645-302-320.

HISTORIC AND ARCHEOLOGICAL RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.12; R645-301-411.

Analysis:

The application meets the Historic and Archeological Resource Information requirements of the State of Utah R645-Coal Mining Rules.

The Permittee submitted a cultural resource report conducted by Todd Seacat and Jody Patterson of Montgomery Archaeological Consultants. The Report is numbered MOAC 08-096 and was prepared on July 14, 2008. The research resulted in the location of 29 sites within the 120-acre expansion area. The report was included in the EA for the BLM and received SHPO concurrence in February of 2009.

Of the 29 identified sites, 17 sites were considered eligible for listing in the National Historic Register. According to the management recommendations of the report, five eligible sites are located north west of the coal burn line (shown in Figure 1 of the report). These sites will require periodic monitoring for subsidence impacts by an archaeologist. Additional mitigation could be required. The remaining twelve sites are situated outside of the subsidence zone and should not be affected.

With the periodic monitoring of the five eligible sites, the researchers found that there would be no adverse effect to cultural resources with this 120-acre expansion.

Findings:

The application meets the Historic and Archeological Resource Information requirements of the State of Utah R645-Coal Mining Rules.

VEGETATION RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.19; R645-301-320.

Analysis:

The application meets the Vegetation Resource Information requirements of the State of Utah R645-Coal Mining Rules.

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The application includes appendix VIII-6, Biological Resources of the Zero Zero North LBA, Plant Communities, and TES species study conducted by Mt. Nebo Scientific in November of 2008.

Plant Communities of the Miller Tract Area 2008:

Dr. Pat Collins of Mt. Nebo Scientific conducted this survey using aerial photography and ground data collection. The following plant communities were mapped in the area: Shadscale, Greasewood, Saltgrass, Riparian, Pasture Land, Sagebrush and tamarisk. A vegetation map is included in the report. No surface disturbances are proposed. Subsidence is the only possible effect on vegetation from the proposed undermining.

Threatened, Endangered and Sensitive Species of the Miller Tract Area 2008:

Dr. Pat Collins of Mt. Nebo Scientific conducted a file search for locations of sensitive species that may be present in the study area. A site-specific survey was also conducted within the miller tract from April to June 2008. No TES species were found in the area.

Findings:

The application meets the Vegetation Resource Information requirements of the State of Utah R645-Coal Mining Rules.

FISH AND WILDLIFE RESOURCE INFORMATION

Regulatory Reference: 30 CFR 784.21; R645-301-322.

Analysis:

The application meets the Fish and Wildlife Resource Information requirements of the State of Utah R645-Coal Mining Rules.

An updated plate 10-1, Selected Wildlife Information that contains the Miller Tract is included in the application. The new area contains the following:

- Crucial/Critical Ring Necked Pheasant year long habitat
- An active Prairie Dog Town
- Burrowing Owl Habitat
- Substantial Value Winter Elk Habitat

A TES, Prairie Dog and Burrowing Owl Survey is included with the application in appendix VIII-6.

TES Survey

Dr. Pat Collins of Mt. Nebo Scientific conducted the TES survey in 2008. Dr. Collins consulted the DWR database of sensitive and high interest wildlife species. Of the listed wildlife species, little or no habitat is present within the Miller tract. The only species that may be present were Burrowing Owl and White tailed Prairie Dog. The results of these two surveys are located in the following reports.

Prairie Dog Survey

Field stations were set up at a known prairie dog colony within the Miller tract to record the activity. The Survey verified that the sensitive species, white tailed prairie dogs, were present at the colony. This colony is shown on figure 1 of the report and plant 10-1.

Burrowing Owl Survey

This survey was conducted by Dr. Pat Collins of Mt. Nebo Scientific between April 15 and July 15th 2008. All active prairie dog burrows were monitored during morning and evenings. It was concluded that Burrowing owls were also present in the active prairie dog colony shown within the Miller tract on plate 10-1 and on figure 1 of the report. Dr. Collins consulted with DWR biologists for the survey and proposed impact to the owls. It was concluded that the owls could be negatively affected during their most critical life period (March through June) due to expected subsidence in the area because of undermining. In a conversation with Tony Wright, Sensitive species Biologist of DWR, Tony expressed concern for subsiding the prairie dog/burrowing owl habitat. Collapsing the burrows and/or causing stream downcutting into the habitat would adversely affect the species. According to Mr. Wright and the US Fish and Wildlife Service's Utah Field Office Guidelines for Raptor Protection from Human and land Disturbances, Mining related disturbance cannot occur between March 1 and August 31. In addition, subsidence impacts occurring at any time in the area should be monitored to make sure the habitat remains suitable for the species.

Findings:

The application meets the Fish and Wildlife Resource Information requirements of the State of Utah R645-Coal Mining Rules.

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HYDROLOGIC RESOURCE INFORMATION

Regulatory Reference: 30 CFR Sec. 701.5, 784.14; R645-100-200, -301-724.

Analysis:

Baseline Information

The application meets the requirements for Baseline Information as required by R645-301-724. Beginning on page VI-3 of the approved MRP, the Permittee provides baseline information for the ground and surface water resources located in within and adjacent to the proposed Zero Zero North Panel.

In addition, the Permittee submitted additional baseline information in Appendix VI-16. As the expansion of the Zero Zero North Panel is a Federal leasing action, an Environmental Assessment (EA) was conducted. The Permittee has provided relevant baseline information from the EA in Appendix VI-16, *Selected Text from Miller Canyon Tract EA*.

The lease expansion area of the Zero Zero North Panel is bisected by Miller Canyon. Based upon site inspections by Division personnel, it's been determined that the reach of Miller Canyon that flows through the expansion area conveys irrigation return flow, runoff from snowmelt and precipitation events and discharge from a small spring (i.e. ephemeral in nature).

The volume of irrigation return flow within the Miller Canyon drainage is of sufficient volume and duration to support a small riparian corridor. On the 1st page of the baseline information in Appendix VI-16, the Permittee provides data obtained from the United States Geological Survey to establish water quality ranges for area drainages. The data clearly shows that the water quality degrades rapidly from the Emery Canal diversion upstream of the lease expansion (below 300 mg/L TDS) to Muddy Creek just below Miller Creek (as high as 3,715 mg/L).

The Permittee establishes that the primary source of flow to the Miller Canyon drainage is from irrigation return flow. During the environmental assessment, the Bureau of Land Management (BLM) conducted numerous site visits. The information contained in Appendix VI-16 discuss how during a BLM site visit on April 24th, 2008 (prior to the start of seasonal irrigation practices), there was an absence of stream flow in Miller Canyon. The only flow documented at that time was from Christiansen Spring (SP-15 in the DOGM Water Quality Database) at a rate of less than 1 gallon per minute. Upon a return site visit, BLM representatives observed flows (following the instigation of seasonal irrigation practices) in excess of 100 gallons per minute.

Probable Hydrologic Consequences Determination

The application meets the requirements for Probable Hydrological Consequences (PHC) as required in R645-301-728. Beginning on page VI-16 of the application, the Permittee discusses the potential impacts from coal mining activities on the quality and quantity of surface and groundwater flow within and adjacent to the permit (including the proposed Zero Zero North Panel expansion into Federal Lease UTU-86038). The Permittee further provides detailed discussion as to how the potential impacts will be minimal and if necessary, can be mitigated. The approved PHC discussion includes the proposed expansion area of the Zero Zero North Panel. The following potential impacts have been evaluated:

- Contamination from acid- or toxic-forming materials;
- Impacts to groundwater availability;
- Impacts to surface water availability;
- Increased total dissolved solids concentrations in surface and groundwater;
- Flooding or streamflow alteration;
- Potential hydrocarbon contamination
- Coal spillage during hauling.

Recent ground water modeling (utilizing monitoring well data obtained from the mine site and surrounding vicinity) performed at the Emery Deep Mine provided the basis for determining the lateral extent of potential ground water impacts associated with mining activity at the site.

As part of the federal leasing process of lease UTU-86038, an Environmental Assessment (EA) was conducted on the 120-acre expansion tract of the Zero Zero North Panel. The EA was provided to the Division prior to the submission of the application. The previous technical analysis (Task ID #3405) had identified a deficiency relative to the probable hydrologic consequences of mining within the 120-acre federal lease addition of the Zero Zero North Panel.

Beginning on page VI-27b, the Permittee provides a thorough discussion of the hydrologic resources within the Zero Zero North expansion and the potential for impacts. As no surface disturbance is planned in the expansion area, accelerated runoff and erosion will not occur. However, due to the full-extraction mining techniques to be utilized in the tract, subsidence could alter local drainage patterns by producing non-uniform settling and tension cracks. From previous permitting actions, the Permittee has provided a commitment to mitigate/repair any surface drainage impacts as a result of subsidence. In areas previously subsided, the tension cracks that formed at the surface have been observed to 'self heal' over a relatively short period of time. The surficial geology of the permit and adjacent area is

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predominantly Mancos shale. The clay components of this soil unit allow for fairly rapid filling of the tension cracks as they swell and expand in response to precipitation events.

As discussed in the MRP, the Ferron aquifer is intercepted by the mining activity at the Emery Deep Mine. As mining expands into the Zero Zero North expansion area, the groundwater in the Ferron Sandstone will continue to be intercepted. However, given the relatively small area of undermining associated with the expansion, it's unlikely that the quantity of intercepted water will change significantly.

Christiansen Spring (SP-15) is located within the expansion area and will be within the cone of depression resulting from mine dewatering. The groundwater modeling provided in the MRP suggests that the potentiometric surface in the vicinity of the spring will potentially decline approximately 24 feet. Such a decline could affect the discharge of the Ferron Sandstone groundwater at Christiansen Spring. However, it's expected that pre-mining groundwater levels will reestablish once mining activity is complete. In addition, the spring is not located within the proposed mining area where subsidence will occur. As a result, it's not expected that the physical setting of the spring would be disturbed.

The Miller Canyon drainage is partially undermined by the proposed expansion of the Zero Zero North Panel. Based upon historical baseline data as well as numerous field observations by Division staff, it's clear that the Miller Canyon drainage flows in response to precipitation events, snowmelt events and irrigation return flows (i.e. ephemeral in nature). As a result, the potential for any potential subsidence to impact surface water resources within the proposed expansion area is minimal. Additionally, if any impacts to surface water resources or state appropriated water rights are produced, the Permittee has provided a commitment in Chapter VI of the approved MRP to promptly replace and/or repair said impacts. Observations of similar mining activity at the mine under similar conditions (i.e. similar overburden, geology, ground and surface water regime's etc.), have not produced significant impacts to hydrologic resources.

The Division finds that the proposed expansion of the Zero Zero North Panel has been designed to prevent material damage to the hydrologic balance outside the Permit area.

Findings:

The application meets the Hydrologic Resource requirements of the State of Utah R645-Coal Mining Rules.

MAPS, PLANS, AND CROSS SECTIONS OF RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.24, 783.25; R645-301-323, -301-411, -301-521, -301-622, -301-722, -301-731.

Analysis:

The application meets the Maps, Plans and Cross Sections of Resource Information as required by the State of Utah R645-Coal Mining Rules.

With the additional lease area being added to the Zero Zero North Panel, the Permittee has revised all relevant plates/maps to depict the revised adjacent area. Hydrologic Plates VI-1, Plate VI-2, Plate VI-4, Plate VI-5, Plate VI-6, Plate VI-7, Plate VI-8, Plate VI-9 and Plate VI-10 have all been revised to depict the additional mining area of the Zero Zero North Panel.

Monitoring and Sampling Location Maps

The MRP meets the requirements for Monitoring and Sampling Location Maps as required by R645-301-731. Plate VI-4, *Ground Water Monitoring Well and Surface Water Monitoring Site Locations*, depicts the locations of all surface and groundwater monitoring points both within and adjacent to the permit area. The additional mining area of the Zero Zero North Panel has been added to the adjacent area depicted on Plate VI-4.

Subsurface Water Resource Maps

The MRP meets the requirements for Subsurface Water Resource Maps as required by R645-301-731. Plate VI-1 depicts the potentiometric surface of the Upper Ferron Sandstone aquifer as of 1979. Plate VI-2 depicts the potentiometric surface of the Lower Ferron Sandstone aquifer as of 1985. Plates VI-7 and VI-8 depict the potentiometric surface of the Upper and Lower Ferron Sandstone respectively for 2006. Plate VI-3 depicts the water rights located within and adjacent to the permit area (including the Zero Zero North Panel).

All of the aforementioned plates have been revised to depict the additional mining area of the Zero Zero North panel.

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Surface and Subsurface Manmade Features Maps

The MRP meets the requirements for Surface and Subsurface Manmade Features Maps as required by R645-301-731. Plate VI-4 depicts all surface and subsurface manmade features located within the permit and adjacent area (including the proposed mining area expansion of the Zero Zero North Panel).

Surface Water Resource Maps

The MRP meets the requirements for Surface Water Resource Maps as required by R645-301-731. Plate VI-4 depicts all surface water located within and adjacent to the permit area (including the proposed expansion of the Zero Zero North Panel).

Well Maps

The MRP meets the requirements for Well Maps as required by R645-301-731. Plate VI-4 depicts all groundwater wells (including monitoring wells) located within and adjacent to the permit area (including the proposed expansion of the Zero Zero North Panel).

Findings:

The application meets the Maps, Plans and Cross Sections of Resource Information requirements of the State of Utah R645-Coal Mining Rules.

OPERATION PLAN

PROTECTION OF PUBLIC PARKS AND HISTORIC PLACES

Regulatory Reference: 30 CFR784.17; R645-301-411.

Analysis:

The application meets the Protection of Public Parks and Historic Places as required by the State of Utah R645-Coal Mining Rules.

See the above information on Historic Resource information. The Permittee has provided a commitment for a plan to monitor the eligible sites that could be damaged due to subsidence.

In Chapter X-a page 1. The Permittee states, " Per management recommendations on page 19 (MOAC-08-095), the five eligible sites (42Em3964, 42Em3965, 42Em3966, 42Em3969, and 42Em3974) will be monitored, post subsidence, for impacts by a qualified archeologist and detailed in the annual report. If mitigation is necessary, a mitigation plan will be submitted to BLM."

Findings:

The application meets the Protection of Public Parks and Historic Places as required by the State of Utah R645-Coal Mining Rules.

SUBSIDENCE CONTROL PLAN

Regulatory Reference: 30 CFR 784.20, 817.121, 817.122; R645-301-521, -301-525, -301-724.

Analysis:

Renewable Resources Survey

The application meets the requirements for Renewable Resources Survey as required in R645-301-724.

A pre-subsidence survey is located in Appendix V-5 with an associated Figure 1 that depicts the area surveyed. Renewable Resource lands are depicted on the Vegetation and Landuse Map Plate VIII-1. Acreages of pastureland are included in the legend.

Subsidence Control Plan

The application meets the Operational Plan requirements for Subsidence Control Plan as provided in R645-301-525.120, -525.480

Section V.B of the MRP discusses subsidence monitoring. Page 36 of the MRP outlines the steps and elements of the proposed subsidence-monitoring plan. The plan calls for the establishment of a series of reference points to be established outside the theoretical angle of draw. Item 1A on page 36 calls for a mine representative to inspect monthly the areas designated as "full extraction" on Plate V-5. The monthly inspections will continue until the survey monitoring points below indicate that there is no subsidence occurring. A record of the monthly inspections will be produced and forwarded to the Division. A copy of the inspection will also be kept at the mine office.

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In addition, the Permittee has committed to establish pre-mining elevations and gradients of any irrigation ditches and pond embankments within the angle of draw (See Item 11 in chapter V page 37). The Permittee will also monitor these areas by visual inspection and post-subsidence ground survey to establish the effects of subsidence. The Permittee has committed to providing the Division with a quarterly subsidence mitigation report that describes the surface mitigation projects and their status broke down by surface landowner.

Subsidence mitigation efforts are further discussed on pages 39-42 of Chapter V of the approved MRP. Pages 41 and 42 of the approved MRP generally discuss timetables and how the Permittee will work with landowners and the Division regarding mitigation efforts. On page 39 of Chapter V of the approved MRP, the Permittee discusses the mitigation process relative to subsidence damage to structures and State appropriated water supplies. The Permittee commits to "restore, rehabilitate or remove and replace, to the extent technologically and economically feasible, each materially damaged structure, feature or value".

Page 41 in Chapter V of the MRP discusses subsidence mitigation. The Permittee states, "If subsidence occurs which prevents flow through a ditch that is used each summer, then it will be necessary to repair the ditch as soon as practical even though future subsidence may necessitate further work".

In addition, the mine has been designed to preclude subsidence in areas occupied by perennial streams. The Permittee has produced a plan to prevent subsidence from affecting Quitchupah Creek, Christiansen Wash and the alluvial valley floor area on the west side of the permit area by establishing buffer zones in these areas. Plate V-5, *Subsidence Monitoring Points and Buffer Zones*, depicts a stream buffer zone extending the full length of Christiansen Wash in the areas where full extraction mining will take place. Additionally, a buffer zone has been established in the alluvial valley floor area around Quitchupah Creek. The overburden depth and the angle of draw were used to determine the buffer zone dimensions. The buffer zone for Quitchupah Creek and Christiansen Wash includes an additional standoff distance of 100 ft. on either side.

The Permittee provides further clarification on subsidence mitigation on page 39 of the MRP. The Permittee commits to "mitigate the damage in accordance with R645-301-525.500" and that "the mitigation process will be performed in accordance with R645-301-731.530, R645-301-525.520 and R645-301-525.530". R645-301-731.530 calls for the prompt replacement of any state appropriated water supply that is contaminated, diminished or interrupted by underground coal mining and reclamation activities. R645-301-525.520 and R645-301-525.530 deal with the mitigation of any structures that are impacted by mining activity

The Permittee provides a commitment to "repair or replace any adversely affected State appropriated water supplies that are contaminated, diminished or interrupted" as required by R645-301-731.530 on page 41 of Chapter V of the MRP.

Per R645-301-731.530, the Permittee is required to promptly replace any State-appropriated water supply that is contaminated, diminished or interrupted by underground coal mining and reclamation activities. On page V-42 of the application, the Permittee outlines water replacement measures to be initiated in the event that mining activity was to impact the Emery Town Wells. If the town of Emery surface water system (Muddy Creek) becomes inoperable and the backup wells (Wells #1 and #2) have been impacted by mining activity, the Permittee provides a commitment to "hauling water to the Emery treatment facility until the towns surface system becomes operable, an alternative source is secured or the aquifer recharges".

Findings:

The application meets the hydrologic requirements for Renewable Resources Survey as required by the R645-Coal Mining Rules.

FISH AND WILDLIFE INFORMATION

Regulatory Reference: 30 CFR Sec. 784.21, 817.97; R645-301-322, -301-333, -301-342, -301-358.

Analysis:

Protection and Enhancement Plan

The application meets the Fish and Wildlife Information requirements of the State of Utah R645-Coal Mining Rules.

The previous technical analysis (Task ID #3405) had identified a deficiency relative to a protection and enhancement plan for the active prairie dog town and burrowing owl nesting area located in the Miller tract. The Division requested that the area be monitored during and after subsidence to ensure that no adverse affects from mining had occurred. In addition, a commitment was requested to conduct mitigation in the event that adverse affects from mining did occur.

During consultation with Mr. Nathan Darnall of the United States Fish and Wildlife Service (USFWS), Mr. Darnall suggested that the operator collapse all burrows that are to be undermined prior to March and install artificial burrows elsewhere. In Appendix IX-3, the Permittee provided the following commitment, "Per consultation with DOGM, Utah Division of Wildlife Resources and the US Fish and Wildlife Service, Consol plans to implement a protection and enhancement plan for the burrowing owl prior to March 1st, 2010. The prairie dog colony, as depicted in the above mentioned appendix at Page 6 Figure 1, resides on private surface owned in fee by Consol that has been tilled in the past." The Permittee goes on to state,

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“One recommendation from the USFWS that may be implemented is for Consol to work with DOGM to locate a remote area to add burrowing owl nesting dens provided by DWR. This enhancement project will be complete prior to the March 1, 2010 burrowing owl nesting period.”

Wetlands and Habitats of Unusually High Value for Fish and Wildlife

Riparian areas exist in the Miller Tract Area according to the Plant Survey in Appendix VIII-1. Miller Creek is an ephemeral drainage that is used for agriculture. The water in the drainage is maintained by the water users and would not be as significant otherwise. The Permittee has committed to maintaining the water flow in the stream.

Findings:

The application meets the Fish and Wildlife Information requirements of the State of Utah R645-Coal Mining Rules.

SPOIL AND WASTE MATERIALS

Regulatory Reference: 30 CFR Sec. 701.5, 784.19, 784.25, 817.71, 817.72, 817.73, 817.74, 817.81, 817.83, 817.84, 817.87, 817.89; R645-100-200, -301-210, -301-211, -301-212, -301-412, -301-512, -301-513, -301-514, -301-521, -301-526, -301-528, -301-535, -301-536, -301-542, -301-553, -301-745, -301-746, -301-747.

Analysis:

Refuse Piles

The application meets the Refuse Pile requirements of the State of Utah R645-Coal Mining Rules.

The proposed expansion of the Zero Zero North Panel does not call for additional surface disturbance. Refuse will not be stored at the site.

The approved MRP contains the design data, maps and hydrologic model runs used to design the drainage system at the existing refuse pile site. R645-301-746.212, as stated above, requires that runoff from a refuse pile must be diverted into stabilized diversion channels that are designed to safely pass the runoff from a 100-year, 6-hour event. Upon review of the submitted model, as well as the surface drainage map, the drainage network at the current refuse pile location meets this requirement.

A permanent refuse disposal site has been designed. The site has been designed to safely pass the 100-year, 6-hour event. Storm water runoff generated from the site will be diverted in

to Pond No. 8. The Permittee has demonstrated that Pond No. 8 has adequate storage capacity to safely contain the storm water runoff generated from the permanent refuse disposal site.

Findings:

The submittal meets the Refuse Pile requirements of R645-301-746.212.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

General

The application meets the Operational Plan requirements for General Hydrologic information as provided in R645-301-731.

Chapter VI of the approved MRP discusses the hydrologic located within the Zero Zero North mining expansion area; including ground and surface water information, water uses, water rights as well as the probable hydrologic consequences of full extraction mining within that area.

The MRP outlines the measures to be taken during the operational mining phase to minimize disturbance of the hydrologic balance within and adjacent to the permit area as well as prevent material damage to the hydrologic balance.

Groundwater Monitoring

The approved MRP meets the Operational Plan requirements for Groundwater monitoring as provided in R645-301-731.210. The Permittee does not propose any additional ground water monitoring as a result of full extraction mining within the expansion of the Zero Zero North panel. Christiansen Wash (SP-15) is located directly within the Miller Canyon drainage. SP-15 is already part of the operational groundwater-monitoring program for the Emery Deep Mine. No additional groundwater monitoring sites have been proposed, nor are they required with the proposed mining area expansion of the Zero Zero North Panel.

The Permittee provides comprehensive water monitoring information as to the specific ground and surface water sites and their respective monitoring protocols in Table VI-17, *Emery Mine Hydrologic Monitoring Program*.

TECHNICAL MEMO

Surface Water Monitoring

The MRP meets the Operational Plan requirements for Surface Water Monitoring as provided in R645-301-731.220. Additional surface water monitoring within the Zero Zero North panel is not necessary. As discussed in the baseline information section above, the Miller Canyon drainage is ephemeral and flows only in direct response to snowmelt/precipitation events and irrigation return flow. As a result, additional surface water monitoring points are not required with the expanded mining area of the Zero Zero North Panel.

Plate VI-4 of the application depicts the surface water monitoring points within the permit area as well as adjacent to it. Table VI-17, *Emery Mine Hydrologic Monitoring Program* provides the sampling protocols for all ground and surface water sites within the permit and adjacent area.

Water-Quality Standards And Effluent Limitations

The MRP meets the requirements for Water-Quality Standards and Effluent Limitations as outlined in R645-301-751. The Permittee operates under a UPDES discharge permit (#UT0022616) issued by the Utah Division of Water Quality (DWQ) and controls discharges from the mine to be consistent with that permit. The Emery Mine UPDES permit currently allows a maximum salt load of 12 tons/day to be discharged from the mine. If this load were discharged constantly throughout the year, the annual salt load from the mine to the Muddy Creek watershed would be 4,380 tons/year. Upon discussions with DWQ personnel, it's anticipated that the salt-load limit will change to approximately 3,839 tons/year. The addition of the Zero Zero North panel does not require additional UPDES effluent/discharge monitoring.

Diversions:

The application meets the requirements for Diversions as required in R645-301-732.300, 742.100, 742.200, 742.300, 742.320 and 742.330. No diversions are proposed/required with the expanded mining area of the Zero Zero North Panel.

Stream Buffer Zones

The application meets the Stream Buffer Zone requirements as provided in R645-301-731.600. Page VI-27 discusses stream buffer zones. Plate V-5, Subsidence Monitoring Points and Buffer Zones, depicts the location of stream buffer zones established on both Christiansen Wash and Quitcupah Creek. All perennial and intermittent streams in the permit area are protected by 100-foot stream buffer zones on either side of these streams. No perennial or intermittent streams are located within 100-feet of the proposed Zero Zero North Panel.

Sediment Control Measures

The application meets the Sediment Control Measure requirements as provided in R645-301-732. As no surface disturbance is proposed with the additional mining area of the Zero Zero North Panel, no additional sediment control measures are required.

Siltation Structures: Sedimentation Ponds

The application meets the Siltation Structures: Sediment Ponds requirements as provided in R645-301-732.200 and -742.220. As no surface disturbance is proposed with the additional mining area of the Zero Zero North Panel, additional siltation structures (i.e. sedimentation ponds) are not required.

Discharge Structures

The application meets the Discharge Structures requirements as provided in R645-301-734, -744. As no surface disturbance is proposed with the additional mining area of the Zero Zero North Panel, no discharge structures are necessary.

Ponds, Impoundments, Banks, Dams, and Embankments

The application meets the requirements for Ponds, Impoundments, Banks, Dams and Embankments as required by R645-301-536.800 and -744.100. As no surface disturbance is proposed with the additional mining area of the Zero Zero North Panel, no additional ponds, impoundments, banks, dams or embankments are required.

Findings:

The application meets the requirements for Hydrologic Information as required by the R645-Coal Mining Rules.

MAPS, PLANS, AND CROSS SECTIONS OF MINING OPERATIONS

Regulatory Reference: 30 CFR Sec. 784.23; R645-301-512, -301-521, -301-542, -301-632, -301-731, -302-323.

Findings:

The application meets the Maps, Plans and Cross Sections of Mining Operations requirement as provided in the State of Utah R645-Coal Mining Rules.

TECHNICAL MEMO

Plate IV-2, *UG Operations Plan* and Plate VI-6, *Historic and Planned Mining Sequence* has been revised to depict the additional mining area of the Zero Zero North Panel.

RECLAMATION PLAN

GENERAL REQUIREMENTS

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

Analysis:

The application meets the General Requirements for Reclamation as provided in R645-301-760. No surface disturbance is proposed with the additional mining area of the Zero Zero North Panel,. As a result, reclamation requirements are not applicable to this application.

Findings:

The application meets the Reclamation requirements as provided in the R645-State of Utah Coal Mining Rules.

ROAD SYSTEMS AND OTHER TRANSPORTATION FACILITIES

Regulatory Reference: 30 CFR Sec. 701.5, 784.24, 817.150, 817.151; R645-100-200, -301-513, -301-521, -301-527, -301-534, -301-537, -301-732.

Analysis:

Reclamation

The application meets the Road Systems and Other Transportation Facilities requirements as provided in R645-301-732.

Additional roads are not proposed with the addition mining area of the Zero Zero North Panel.

Findings:

The application meets the Road Systems and Other Transportation Facilities requirements as provided in R645-301-732.

CUMULATIVE HYDROLOGIC IMPACT ASSESSMENT

Regulatory Reference: 30 CFR Sec. 784.14; R645-301-730.

Analysis:

The application meets the Cumulative Hydrologic Impact Assessment (CHIA) requirements as provided in R645-301-730.

The proposed expansion of the Zero Zero North Panel lies within the existing CHIA boundary. As discussed in the PHC section of this analyses (See Above), the proposed mining expansion into Federal Lease UTU-86038 has been designed to prevent material damage to the hydrologic balance outside the permit area.

RECOMMENDATIONS:

The application should be approved at this time.

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JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

October 8, 2009

To: Internal File

From: Daron R. Haddock, Permit Supervisor 

Re: Compliance Review for Section 510 (c) Findings – Consolidation Coal Company

As of the writing of this memo, there are no NOVS or COs which are not corrected or in the process of being corrected for Consolidation Coal Company. There are no finalized Civil Penalties, which are outstanding and overdue in the name of Consolidation Coal Company. Consolidation Coal Company does not have a demonstrated pattern of willful violations, nor have they been subject to any bond forfeitures for any operation in the state of Utah.

The recommendation from the Applicant Violator System (AVS) denotes that the listed violations are all under the Island Creek settlement (see attached AVS Evaluation Report, dated October 7, 2009).

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Entity Evaluation

Entity Number 107373
 Entity Name Consolidation Coal Co
 Date of Evaluation 10/7/2009 6:05:34 PM
 Requested Individual Angela.Nance

CAUTION: The Applicant/Violator System (AVS) is an informational database. Permit eligibility determinations are made by the regulatory authority with jurisdiction over the permit application not by the AVS. Results which display outstanding violations may not include critical information about settlements or other conditions that affect permit eligibility. Consult the AVS Office at 800-643-9748 for verification of information prior to making decisions on these results.

18 Violations Found.

1: State Civil Penalty	<u>053004</u>	KY	Permit:2985329	Outstanding	3/27/1986
Violator 1:	078176 Adkins & Webb Inc				
2: Bond Forfeiture	<u>2985329</u>	KY	Permit:2985329	Outstanding	5/14/1987
Violator 1:	078176 Adkins & Webb Inc				
3: Bond Forfeiture	<u>2985332</u>	KY	Permit:2985332	Outstanding	8/19/1988
Violator 1:	108056 J & H Coal Co				
4: State Civil Penalty	<u>054149</u>	KY	Permit:2985332	Outstanding	3/28/1988
Violator 1:	108056 J & H Coal Co				
5: State Civil Penalty	<u>053764</u>	KY	Permit:2985332	Outstanding	9/18/1987
Violator 1:	108056 J & H Coal Co				
6: State Civil Penalty	<u>053671</u>	KY	Permit:4985319	Outstanding	5/22/1987
Violator 1:	034732 Price Coal Co				
7: State Civil Penalty	<u>054020</u>	KY	Permit:4985319	Outstanding	4/26/1988
Violator 1:	034732 Price Coal Co				
8: State Civil Penalty	<u>054058</u>	KY	Permit:4985319	Outstanding	11/20/1987
Violator 1:	034732 Price Coal Co				
9: State Civil Penalty	<u>054323</u>	KY	Permit:4985319	Outstanding	6/15/1988
Violator 1:	034732 Price Coal Co				
10: State Civil Penalty	<u>054148</u>	KY	Permit:4985319	Outstanding	3/24/1988
Violator 1:	034732 Price Coal Co				
11: Bond Forfeiture	<u>4985319</u>	KY	Permit:4985319	Outstanding	1/20/1989
Violator 1:	034732 Price Coal Co				
12: Bond Forfeiture	<u>6985333</u>	KY	Permit:6985333	Outstanding	1/16/1990
Violator 1:	108056 J & H Coal Co				
13: State Civil Penalty	<u>053934</u>	KY	Permit:6985333	Outstanding	10/2/1987
Violator 1:	108056 J & H Coal Co				
14: State Civil Penalty	<u>054442</u>	KY	Permit:6985333	Outstanding	6/15/1988
Violator 1:	108056 J & H Coal Co				
15: State Civil Penalty	<u>053757</u>	KY	Permit:6985333	Outstanding	7/6/1987
Violator 1:	108056 J & H Coal Co				
16: State Civil Penalty	<u>054316</u>	KY	Permit:6985333	Outstanding	3/28/1988
Violator 1:	108056 J & H Coal Co				
17: State Civil Penalty	<u>053568</u>	KY	Permit:6985333	Outstanding	6/5/1987
Violator 1:	108056 J & H Coal Co				
18: State Civil Penalty	<u>504587</u>	KY	Permit:8985157	Outstanding	8/23/1988
Violator 1:	007928 Past Coal Company Incorporated				

Evaluation OFT

Entities: 49

124819 Consol Energy Inc - ()
 ---099569 Thomas F Hoffman - (Senior Vice President)
 ---107373 Consolidation Coal Co - (Subsidiary Company)
 -----118427 J Brett Harvey - (Chairman of the Board)

-----118427 J Brett Harvey - (Chief Executive Officer)
 -----118427 J Brett Harvey - (Director)
 -----127689 Rodney E Ford - (Assistant Secretary)
 -----132176 William J Lyons - (Director)
 -----134273 Robert P King - (Director)
 -----134273 Robert P King - (Vice President)
 -----135906 Bart J Hyita - (Chief Operations Officer)
 -----135906 Bart J Hyita - (Director)
 -----135906 Bart J Hyita - (President)
 -----139593 Robert F Pusateri - (Director)
 -----152005 Nicholas J DeIulius - (Director)
 -----154545 Jack K Richardson - (Vice President)
 -----155925 P Jerome Richey - (Director)
 -----156239 Lorraine L Ritter - (Assistant Secretary)
 -----156239 Lorraine L Ritter - (Controller)
 -----158031 Louis Barletta Jr - (Vice President)
 -----158032 Daniel S Cangilla - (Treasurer)
 -----158150 Jimmy A Brock - (Vice President)
 -----159673 Alexander J Reyes - (Secretary)
 -----247139 Charles T Shaynak - (Vice President)
 -----248749 Brian T Murdy - (Assistant Secretary)
 -----248777 David W Kelly - (Vice President)
 ---118427 J Brett Harvey - (Chief Executive Officer)
 ---118427 J Brett Harvey - (Director)
 ---118427 J Brett Harvey - (President)
 ---122200 Randall M Albert - (Senior Vice President)
 ---125002 Phillip W Baxter - (Director)
 ---125002 Phillip W Baxter - (Shareholder)
 ---128701 John T Mills - (Director)
 ---132175 John M Reilly - (Treasurer)
 ---132175 John M Reilly - (Vice President)
 ---132176 William J Lyons - (Chief Financial Officer)
 ---132176 William J Lyons - (Executive Vice President)
 ---133137 James J Mccaffrey - (Senior Vice President)
 ---134273 Robert P King - (Executive Vice President)
 ---135906 Bart J Hyita - (Chief Operations Officer)
 ---139593 Robert F Pusateri - (Executive Vice President)
 ---146302 Raj K Gupta - (Director)
 ---146635 Joseph T Williams - (Director)
 ---147650 John L Whitmire - (Director)
 ---147650 John L Whitmire - (Shareholder)
 ---148713 Gary J Bench - (Shareholder)
 ---151262 Patricia A Hammick - (Director)
 ---152005 Nicholas J DeIulius - (Chief Operations Officer)
 ---152005 Nicholas J DeIulius - (Vice President)
 ---152015 Albert A Aloia - (Senior Vice President)
 ---154540 James Sr E Altmeyer - (Director)
 ---154541 William E Davis - (Director)
 ---154543 William P Powell - (Director)
 ---154545 Jack K Richardson - (Vice President)
 ---155925 P Jerome Richey - (Corporate Officer)
 ---155925 P Jerome Richey - (Executive Vice President)
 ---155925 P Jerome Richey - (Secretary)
 ---155925 P Jerome Richey - (Vice President)
 ---156239 Lorraine L Ritter - (Controller)
 ---156239 Lorraine L Ritter - (Vice President)
 ---157830 David C Hardesty Jr - (Director)
 ---158031 Louis Barletta Jr - (Vice President)
 ---158110 Stephanie L Gill - (Assistant Secretary)
 ---158150 Jimmy A Brock - (Senior Vice President)
 ---158360 Cecil L Delloma - (Vice President)
 ---158931 George F Rosato - (Vice President)
 ---246806 Donna A Spec - (Assistant Secretary)
 ---246814 Michael D McLean - (Vice President)
 ---247137 Steven E Winberg - (Vice President)
 ---247139 Charles T Shaynak - (Vice President)
 ---247471 Thomas O Johnson - (Vice President)
 ---248725 Stephen W Johnson - (General Counsel)
 ---248725 Stephen W Johnson - (Vice President)
 ---248744 William D Gillenwater - (Vice President)
 ---248745 Darryl M Husenits - (Vice President)
 ---248746 M Charles Hardoby - (Vice President)
 ---248747 Robert M Belesky - (Vice President)
 ---248748 J Michael Onifer - (Senior Vice President)
 ---248777 David W Kelly - (Vice President)
 ---249573 Daniel Zajdel - (Vice President)

Narrative 10/08/2009 Violations 1-18 are under Island Creek settlement. Linking entities are the evaluated entity, etc. lk