

APPENDIX A

Consultation

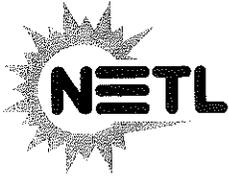
Federal and State Agencies (A1), Native American Tribes (A2)

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APPENDIX A1

Correspondence with Federal and State Agencies
USFWS, UT DNR, UT SHPO

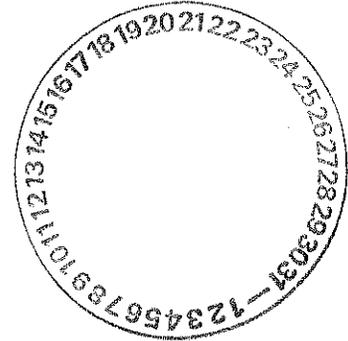
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NATIONAL ENERGY TECHNOLOGY LABORATORY
Albany, OR • Morgantown, WV • Pittsburgh, PA



December 1, 2010



Mr. Larry Crist
Field Supervisor
U.S. Fish & Wildlife Service
Utah Field Office
2369 Orton Cir, STE 50
West Valley City, UT 84119

Dear Mr. Crist:

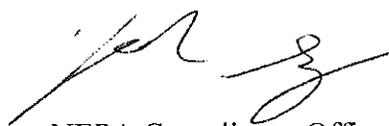
The U. S. Department of Energy (DOE) is considering an action involving federal participation in the construction and operation of a pilot hydro-gasification plant to reduce coal and biomass into fuel in Kane County, Utah. The project is to be located at: Sec 10, T44S, R6W, Salt Lake base and meridian, SW4NW4NW4, Section 10, Kane County, Utah. This land is administered by the State of Utah, School & Institutional Trust Lands Administration. A description of the proposed project, site drawings and graphics depicting its location are provided as attachments.

As part of our coordination and consultation responsibilities, and to comply with Section 7 of the Endangered Species Act of 1973, as amended, we would appreciate receiving any information you have on wildlife resources, including endangered or threatened species or critical habitat, in the project area. Your thoughts on the potential impacts associated with the proposed project would also be appreciated.

Based on the nature and scale of the proposed pilot testing, DOE considers the proposed action to be one that would not significantly affect any endangered or threatened species or their habitat. We would appreciate a written response acknowledging your concurrence with DOE's assessment or indicating potential consequences that might result from the proposed action.

Should you require additional information, please contact me at the information provided below.

Sincerely,


NEPA Compliance Officer

<input checked="" type="checkbox"/>	Concur No Effect
<input type="checkbox"/>	Concur Not Likely to Adversely Affe
<input type="checkbox"/>	No Comment
	
U.S.F.W.S. - Utah Field Supervisor	
Date: 1/3/11	

Attachments



April 13, 2011

Gary Bennett
Utah Department of Natural Resources
Division of Wildlife Resources
P.O. Box 606
Cedar City, UT 84720-0606

Dear Mr. Bennett:

The U.S. Department of Energy (DOE) is considering providing federal funding for the construction and testing of a pilot hydro-gasification plant to reduce coal and biomass into fuel in Kane County, Utah. The project is to be located at: Sec 10, T44S, R6W, Salt Lake base and meridian, SW4NW4NW4, Section 10, Kane County, Utah (see the attached Site Location Map). This land is administered by the State of Utah, School and Institutional Trust Lands Administration. A description of the proposed project, site drawings and graphics depicting its location are provided as attachments.

As part of our coordination and consultation responsibilities, and to comply with Section 7 of the Endangered Species Act of 1973, as amended, we contacted the U.S. Fish and Wildlife Service on December 1, 2010. As evidenced in the attached copy of our correspondence, the Utah Field Supervisor indicated that the project is expected to have "no effect" on federally listed species.

We would appreciate receiving any information you have on wildlife resources, including state-listed species or critical habitat, in the project area. Your thoughts on the potential impacts associated with the proposed project would also be appreciated. Based on the nature and scale of the proposed pilot testing, DOE considers the proposed action to be one that would not significantly affect any endangered or threatened species or their habitat.

We would appreciate a written response acknowledging your concurrence with DOE's assessment or indicating potential consequences that might result from the proposed action.

Should you require additional information, please contact me using the information provided below.

Mr. Joseph Zambelli
U.S. Department of Energy
National Energy Technology Laboratory
3610 Collins Ferry Road
PO Box 880
M/S: B07
Morgantown, WV 26507-0880
Email: joseph.zambelli@netl.doe.gov
Phone: (304) 285-4913

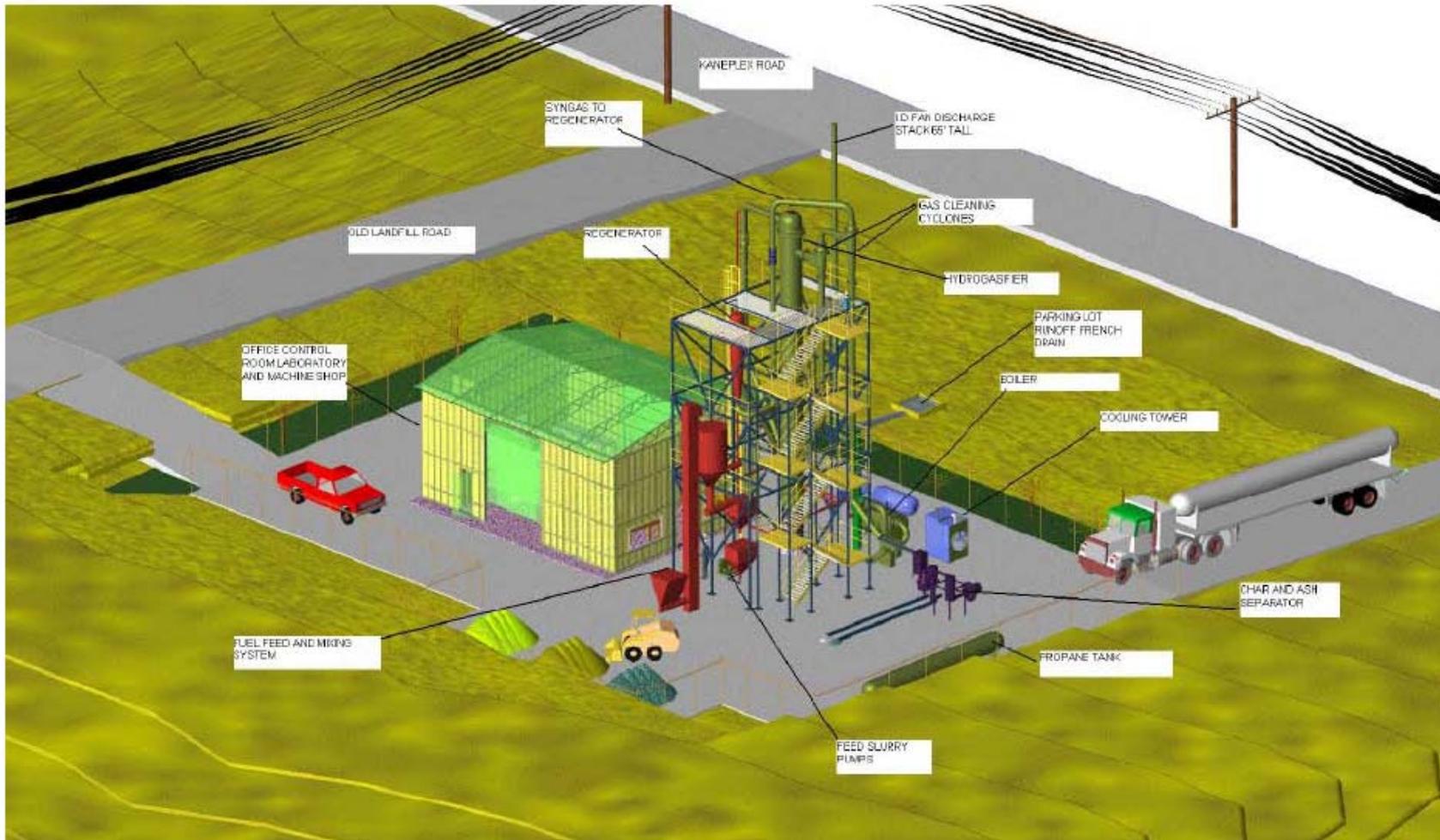
Fax: (304) 285-4403

Sincerely,

A handwritten signature in black ink that reads "Joseph Zambelli". The signature is written in a cursive style with a large, prominent "J" and "Z".

Joseph Zambelli
NEPA Document Manager

Enclosures

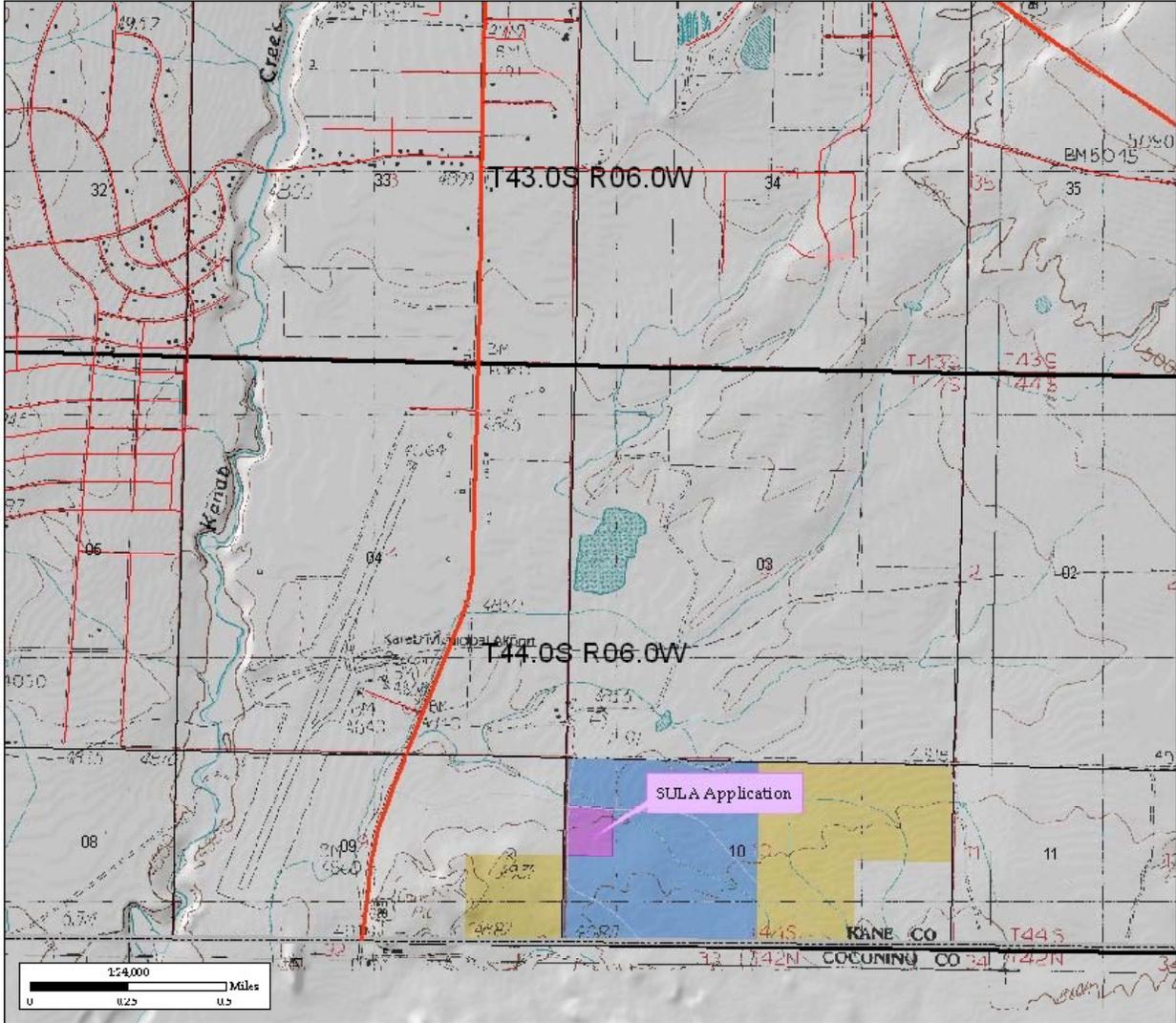


Conceptual View of Pilot Plant Looking Northwest

Project Description

This project involves conducting a pilot-scale evaluation of the Steam Hydrogasification Reaction (SHR) process for converting carbonaceous feedstock such as coal and biomass into a clean, high-energy content product gas suitable for downstream production of a number of carbon-based fuels and chemicals including sulfur-free Fischer-Tropsch diesel, jet fuel, dimethyl ether and methane. Feedstocks to be used in this evaluation include a Utah sub-bituminous (and/or lignite) coal and at least one woody biomass material. The concept conceived is a fluid bed gasifier fluidized by steam and recycled hydrogen with sand as the primary bed material and a heat carrier connected by a standpipe and return line to a fluid bed regenerator (combustor) that heats the sand using char carbon and air. The pilot-scale gasifier to be constructed and operated in this project will have a feedstock throughput of up to 5 tons-per-day.

Field site preparation activities include minor excavation on 0.75 acres with a slope of 10 percent, utility trenching and installation of a concrete slab measuring 40 feet by 45 feet. A building will be erected on the slab. Exterior production structures and machinery will occupy an additional 5000 square feet. Maximum height is 67 feet. Stockpiles of sand, coal and biomass material will be stored onsite.



**Special Use Lease Agreement
New Application**
**Township 44 South, Range 6 West, SLB&M,
SW4NW4NW4, Section 10,**
Kane County
 May 24, 2010

Legend

- Special Use Lease Agreement
- State of Utah Department of Administration
- Bureau of Land Management
- Bureau of Reclamation
- National System Land Use Limits
- National Recreation Area
- National Dark, Montane & Historic Sites
- National Forest
- National Wetlands Area
- National Wildlife Refuge
- Other Federal
- Military Reservations and Corps of Engineers Storage
- State Trust Lands
- State Sovereign Land
- State Parks and Recreation
- State Wildlife Recovery/Management Area
- Other State
- Other Lands

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Data represented on this map is for REFERENCE USE ONLY and is NOT to be used in place of a legal land survey. The Utah State Department of Administration (SDA) and Utah Department of Natural Resources (UDNR) maintain no responsibility for errors or omissions in these materials and provide them "as is" and "as available". All data layers may have been adjusted to align with other digital layers for 2009 base digital imagery, which involves the points in order to allow for a "best fit". While SULA seeks to verify data for accuracy and correct inaccuracies may exist within the data SULA hereby disclaims any and all liability due to the use or misuse of this map and the data represented on this map. The user assumes all responsibility for verification and use.

Colors, lines, symbols, highways, roads, county and state boundaries were USGS 1:100,000 scale files, and contour lines (if present) were generated from USGS 250-foot contour files, collected and distributed by the Utah Automated Geographic Reference Center. The geographic information was originally digitized by Utah State Geospatial Information Center (USGIC) and has been edited by Utah State Department of Administration (SDA) to reflect current state ownership. TLA, water and mineral ownership is frequently being updated and controlled by TLA. Other and detailed information is available from the appropriate agencies: Utah Aerial Photo Collection, Agricultural Imagery Program, NAD 2011.

Site Location Map



NATIONAL ENERGY TECHNOLOGY LABORATORY
Albany, OR • Morgantown, WV • Pittsburgh, PA



December 1, 2010



Mr. Larry Crist
Field Supervisor
U.S. Fish & Wildlife Service
Utah Field Office
2369 Orton Cir, STE 50
West Valley City, UT 84119

Dear Mr. Crist:

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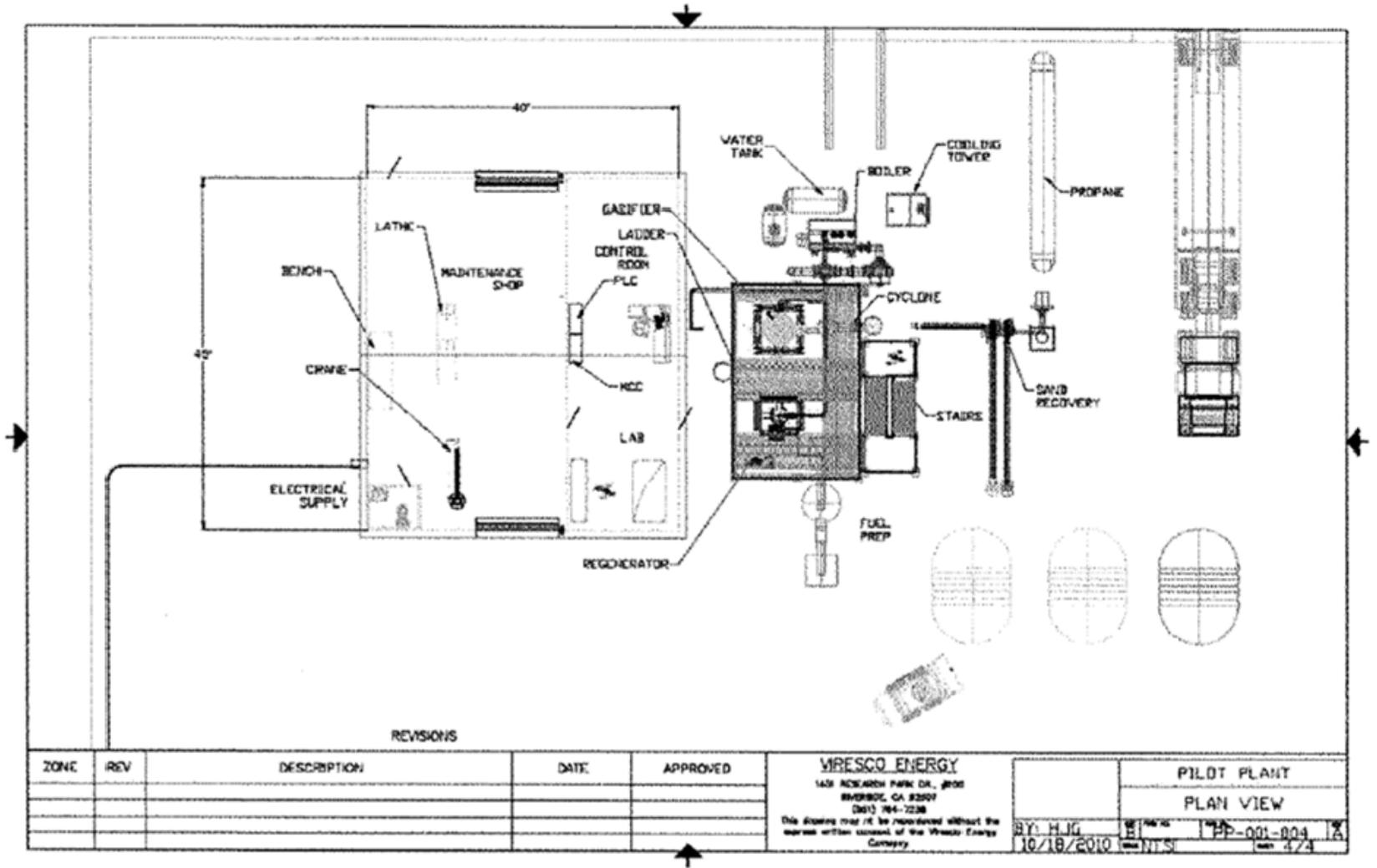
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Sincerely,


NEPA Compliance Officer

<input checked="" type="checkbox"/>	Concur No Effect
<input type="checkbox"/>	Concur Not Likely to Adversely Affect
<input type="checkbox"/>	No Comment
	
U.S.F.W.S. - Utah Field Supervisor	
Date: 1/3/11	

Attachments



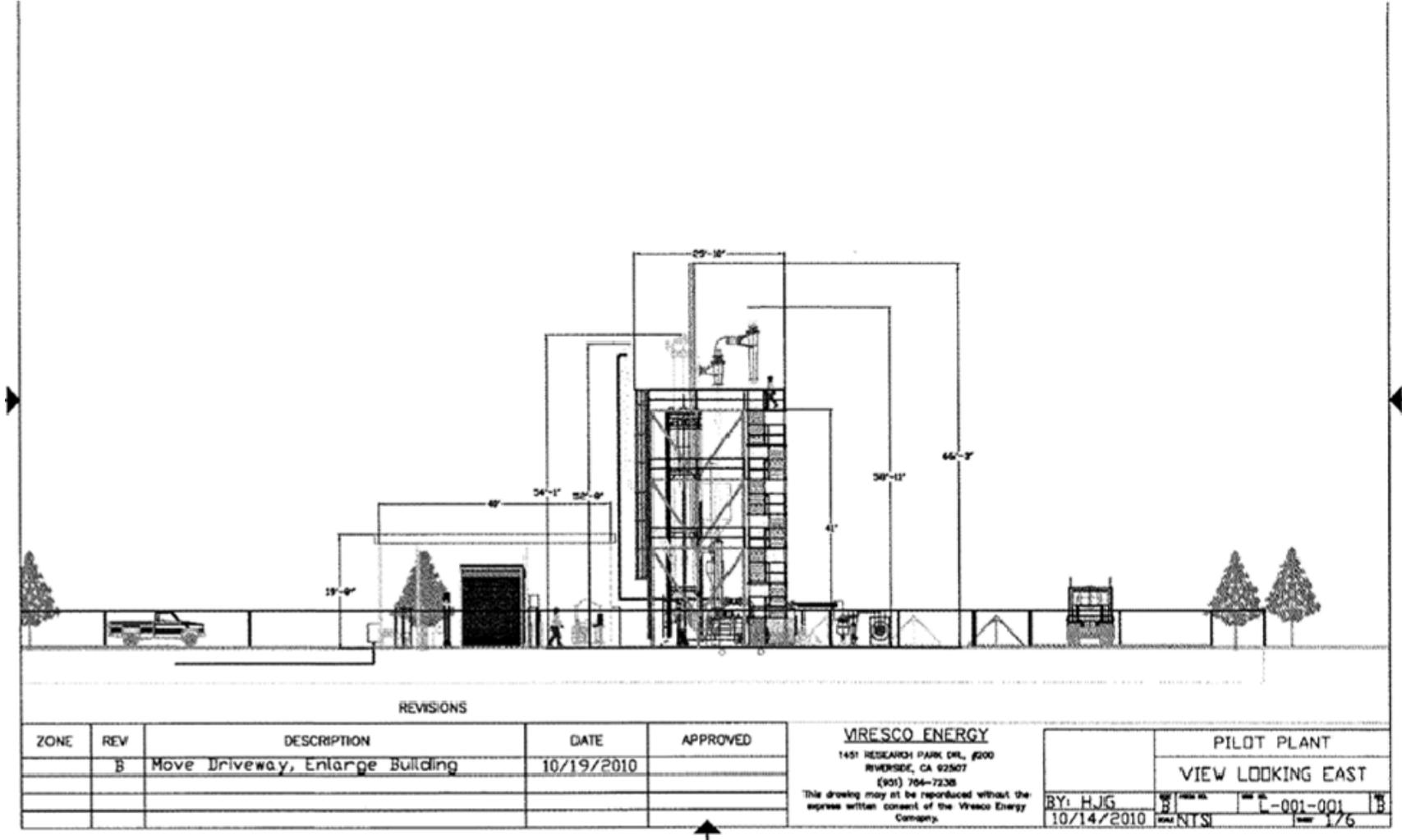
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED

VIRESCO ENERGY
 1430 RESEARCH PARK DR., #200
 RIVERSIDE, CA 92507
 (951) 764-7238
 This drawing may not be reproduced without the express written consent of the Viresco Energy Company

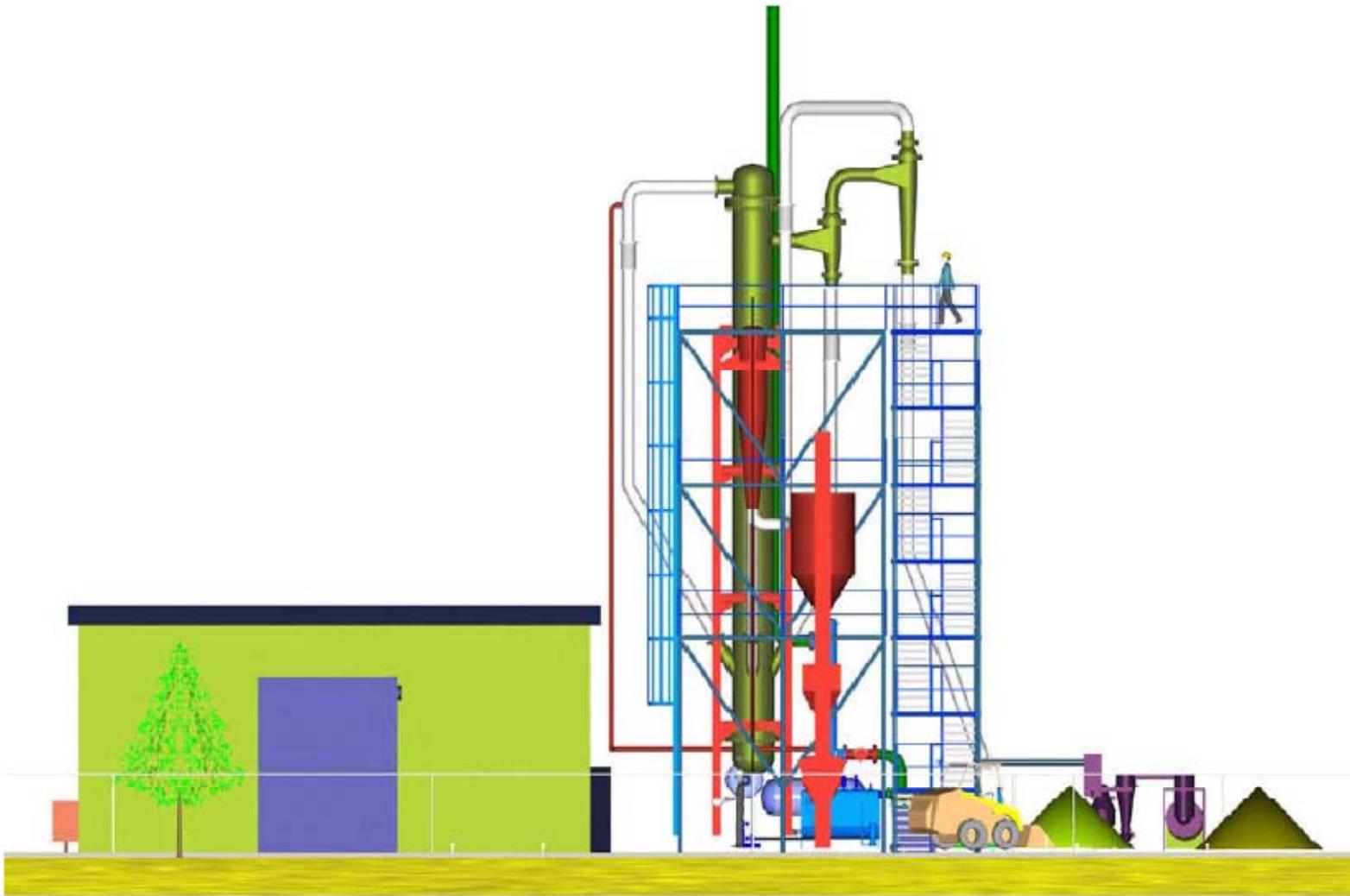
PILOT PLANT	
PLAN VIEW	
BY: HJG	DATE: 10/18/2010
PP-001-004	REV: 1

Plan View

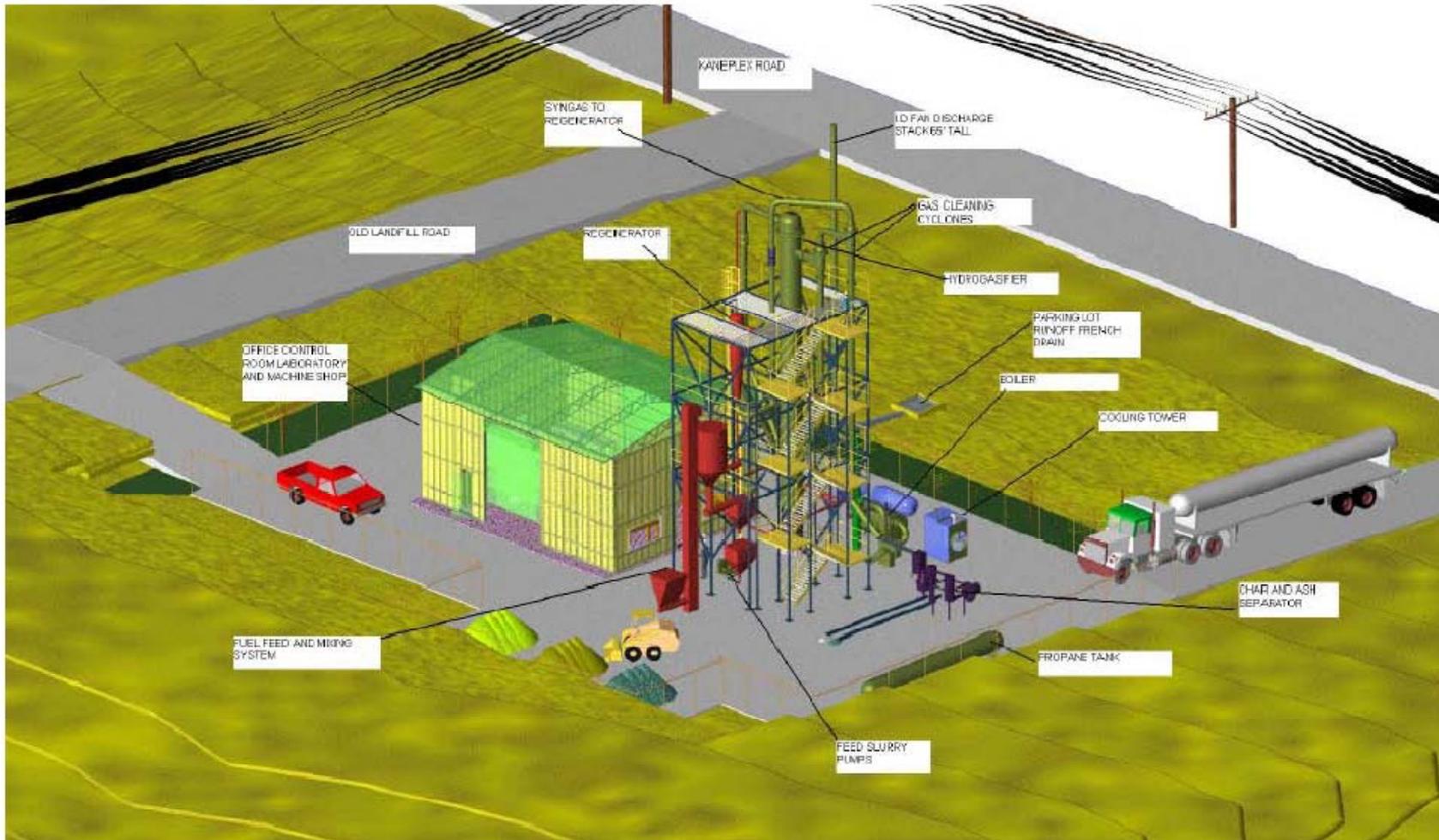


View Looking East

UT DNR



View Looking East 2



View Looking Northwest

From: Carmen Bailey [carmenbailey@utah.gov]
Sent: Tuesday, June 28, 2011 11:06 AM
To: joseph.zambelli@netl.doe.gov
Cc: Gary Bezzant; Judy Edwards; Rhett Boswell; Sarah Lindsey
Subject: hydro-gasification plant

Mr. Zambelli,

Thank you for your letter informing us about the proposed hydro-gasification plant project. We cannot submit a concurrence letter on this project at this time but we can provide you a list of sensitive species in the project area if you make a data request with our Data Manager, Sarah Lindsey, at 801-538-4759. Please contact her with your project information and she can conduct a search for state and federally sensitive species provided to you in a letter.

The Utah Division of Wildlife Resources typically provides comments on impacts to wildlife after we have received a draft Environmental Assessment or project proposal.

Please feel free to contact me with any further questions.

Thank you, Carmen

Carmen Bailey
Impact Analysis Coordinator
Division of Wildlife Resources
Department of Natural Resources
1594 West North Temple, Suite 2110
Salt Lake City, UT 84114-6301
office (801) 538-4751, fax (801) 538-4745
cell (801) 718-5954
carmenbailey@utah.gov



JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Wildlife Resources

JAMES F. KARPOWITZ
Division Director

July 6, 2011

Joseph Zambelli
U.S. Department of Energy
National Energy Technology Laboratory
3610 Collins Ferry Road
P.O. Box 880
Morgantown, WV 26507

Subject: Species of Concern Near the Utah Coal & Biomass Fueled Hydro-gasification Pilot Plant Project

Dear Joseph Zambelli:

I am writing in response to your email dated June 28, 2011 regarding information on species of special concern proximal to the proposed Utah Coal & Biomass Fueled Hydro-gasification Pilot Plant Project to be located in Section 10 of Township 44 South, Range 6 West, SLB&M in Kane County, Utah.

The Utah Division of Wildlife Resources (UDWR) does not have records of occurrence for any threatened, endangered, or sensitive species within the project area noted above. However, in the vicinity there are historical records of occurrence for bald eagle, ferruginous hawk and southwestern willow flycatcher. All of the aforementioned species are included on the *Utah Sensitive Species List*.

The information provided in this letter is based on data existing in the Utah Division of Wildlife Resources' central database at the time of the request. It should not be regarded as a final statement on the occurrence of any species on or near the designated site, nor should it be considered a substitute for on-the-ground biological surveys. Moreover, because the Utah Division of Wildlife Resources' central database is continually updated, and because data requests are evaluated for the specific type of proposed action, any given response is only appropriate for its respective request.

In addition to the information you requested, other significant wildlife values might also be present on the designated site. Please contact UDWR's habitat manager for the southern region, Bruce Bonebrake, at (435) 865-6111 if you have any questions.

Please contact our office at (801) 538-4759 if you require further assistance.

Sincerely,

Sarah Lindsey
Information Manager
Utah Natural Heritage Program

cc: Bruce Bonebrake





May 13, 2011

Lori Hunsaker
 Deputy State Historic Preservation Officer
 Utah Department of Community and Culture
 300 South Rio Grande Street
 Salt Lake City, UT 84101

Re: Kanab Steam Hydrogasification Pilot Plant

Dear Ms. Hunsaker:

Viresco Energy's proposed project, Kanab Steam Hydrogasification Pilot Plant (see attachment), which is on land managed by the Utah School and Institutional Trust Lands Administration (SITLA), requires compliance with 36 CFR Part 800.4(d)(1). Viresco Energy, LLC contracted Bighorn Archaeological Consultants, LLC to assist SITLA in fulfilling requirements under various federal and state environmental protection laws, including the National Historic Preservation Act (NHPA), the National Environmental Policy Act (NEPA), and the Utah Antiquities Act, and to perform an inventory of the proposed area of potential effect.

In September 2010 Bighorn conducted the inventory under Utah Project Authorization Number U10-O-0690s, and recorded two archaeological sites, 42KA6967 (a newly recorded open lithic scatter) and 42KA5613 (a previously recorded historic trash scatter). Bighorn prepared a report titled "*A Cultural Resource Inventory of the Proposed Kanab Steam Hydrogasification Pilot Plant, Kane County, Utah*" (Report Number 10-53) in which they considered both sites to be not eligible to the National Register of Historic Places. In late 2010 the report was submitted by Lisa Beck at SITLA to the Utah Department of Community and Culture State Historic Preservation Office (SHPO) as per the SHPO-SITLA cultural resources consultation Programmatic Agreement (SHPO Case No. 11-0075). As no eligible properties were located during the inventory, the SHPO did not provide a concurrence letter within 30 days, but per the Programmatic Agreement their concurrence was assumed by Lisa Beck at SITLA.

Because the U.S. Department of Energy (DOE) is considering an action to provide federal financial assistance to Viresco's project, DOE also has a responsibility to comply with NHPA and NEPA. Based on DOE's analysis of the report completed by Bighorn and events documented in this letter, DOE has determined that the proposed project will result in no historic properties affected. In compliance with 36 CFR Part 800.4(d)(1), the DOE asks the SHPO for its formal concurrence on this finding.

Sincerely,

A handwritten signature in cursive script that reads "Joseph Zambelli".

Joseph Zambelli
 NEPA Document Manager

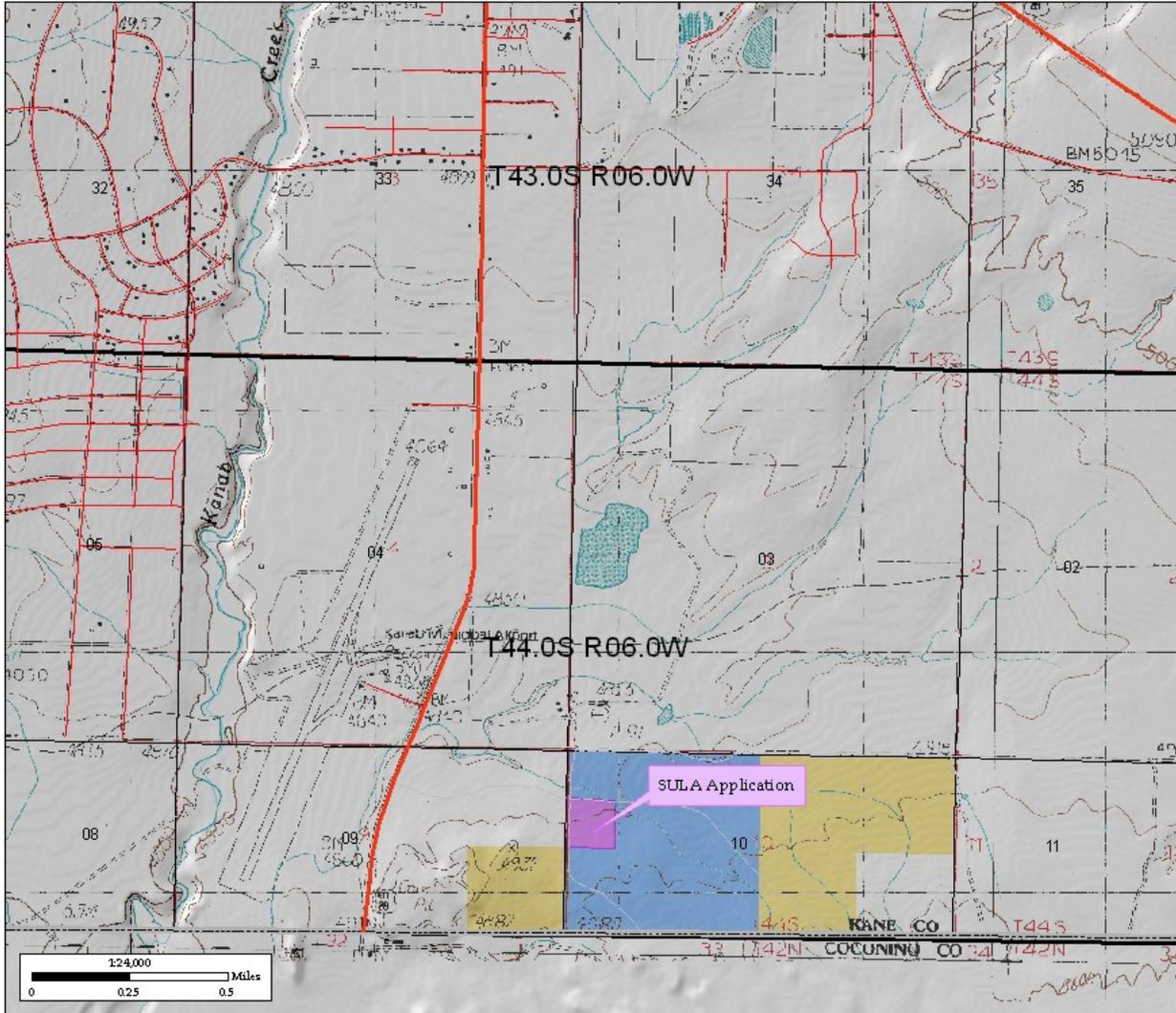
Enclosure

ATTACHMENT -- Project Description:

The project would be located at: Sec 10, T44S, R6W, Salt Lake base and meridian, SW4NW4NW4, Section 10, Kane County, Utah (see the attached Site Location Map). This land is managed by Utah's School & Institutional Trust Lands Administration. A conceptual drawing of Viresco's proposed project is also attached.

Viresco's project involves the design, construction, and testing of a pilot-scale steam hydrogasification facility to evaluate the enhanced conversion of carbonaceous material in a high-steam environment. During operation the pilot-scale hydrogasification process would convert carbonaceous feedstocks such as coal, and vegetative biomass, into synthesis gas suitable for further processing to liquid fuel or to substitute natural gas. The concept for the pilot plant involves a fluid bed gasifier fluidized by steam and recycled hydrogen with sand as the primary bed material and a heat carrier connected by a standpipe and return line to a fluid bed regenerator (combustor) that heats the sand using char carbon and air. The pilot-scale gasifier to be constructed and operated in this project would have a feedstock throughput of up to 5 tons-per-day when operating.

Field site preparation activities contracted by Viresco would include minor excavation on 0.75 acres with a slope of 10 percent, utility trenching and installation of a concrete slab measuring 40 feet by 45 feet. Viresco would then construct a building on the slab. Exterior production structures and machinery would occupy an additional 5,000 square feet. Maximum height of structures would be 67 feet. Stockpiles of sand, coal and biomass material would be stored onsite.



**Special Use Lease Agreement
New Application**

**Township 44 South, Range 6 West, SLB&M,
SW4NW4NW4, Section 10,
Kane County**

May 24, 2010

- Special Use Lease Agreement
- Land Ownership and Administration
- Bureau of Land Management
- Bureau of Reclamation
- Bunkered Jones Land Use Lands
- National Recreation Areas
- National Parks, Monuments & Historic Sites
- National Forest
- National Wilderness Area
- National Wildlife Refuge
- Other Federal
- Military Reservations and Corps of Engineers
- State
- State Trust Lands
- State Severign Land
- State Parks and Recreation
- State Wildlife Reserve/Management Area
- Other State
- Tribal Lands

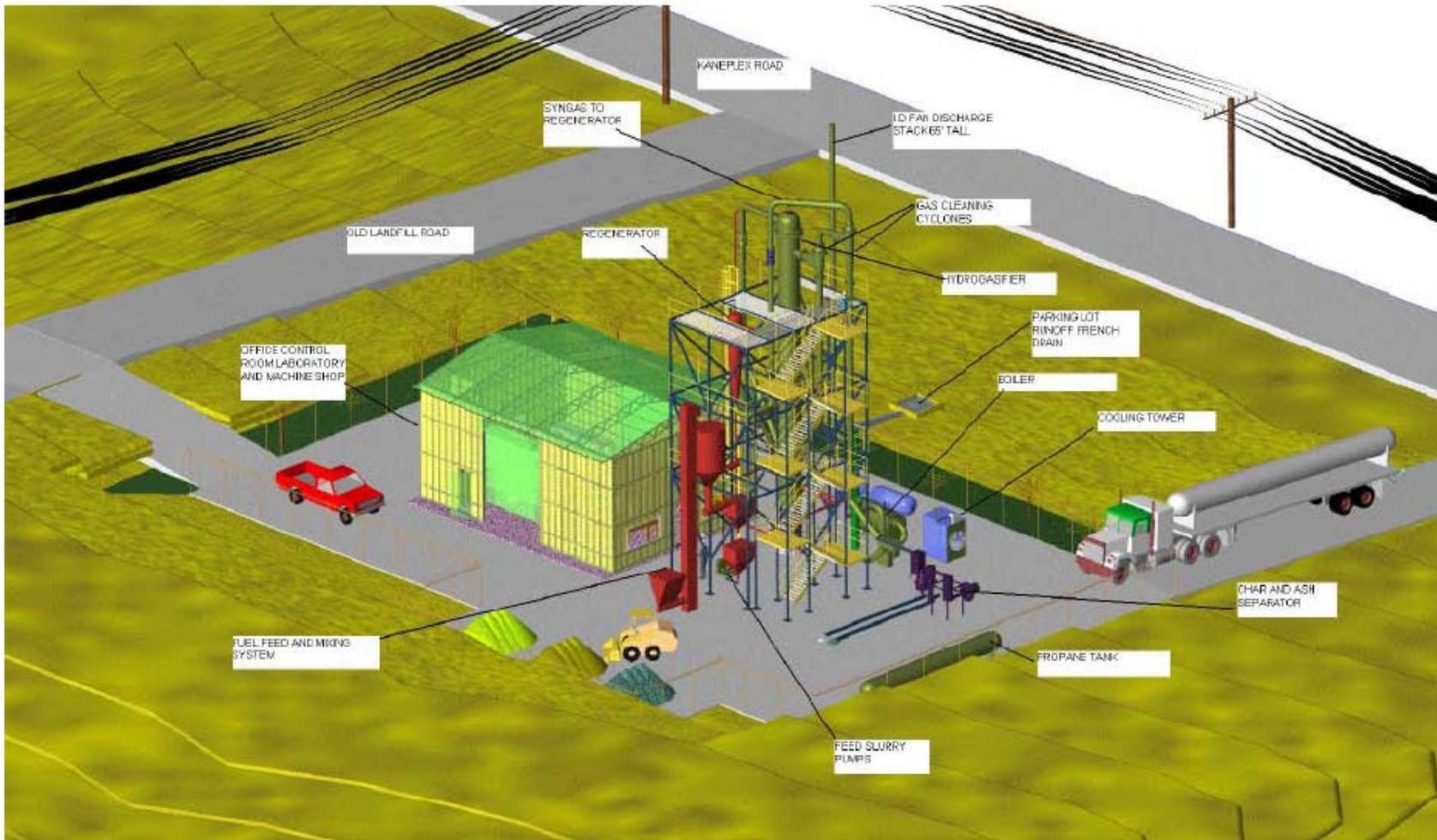
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2010
The Utah State Office of Information

This map was prepared for the SWP PRINCE USE ONS V and is NOT to be used in place of a field land survey. The Utah School and Institutional Trust Lands Administration (SITLA) (UTGS) Department assumes no responsibility for errors or omissions in these materials. Land parcels, line boundaries and associated SULA information may have been updated to align with other digital features (e.g. 1:50,000 scale, digital imagery, study project) to points in order to allow for best "best fit". While SULA seeks to verify data for accuracy and content, discrepancies may exist within the data. SULA hereby disclaims any and all liability due to these or omissions of this map and the data represented on this map. The user assumes all responsibility for verification and use.

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Site Location Map



Conceptual View of Pilot Plant Looking Northwest



State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of Community and Culture

MICHAEL HANSEN
Acting Executive Director

State History

WILSON G. MARTIN
Acting Director

May 25, 2011

Joseph Zambelli
NEPA Document Manager
National Energy Technology Laboratory
3610 Collins Ferry Road
P.O. Box 880
Morgantown WV 26507

RE: Kanab Steam Hydrogasification Pilot Plant

In reply please refer to Case No. 11-0075

Dear Mr. Zambelli:

The Utah State Historic Preservation Office received your report on May 16, 2011. We have not yet received a request for review of this undertaking from a federal agency. Per 800 Regulations, DOE should submit a Section 106 request for consultation. As you indicated, SITLA sent the report as part of their responsibility per a Streamlining PA with Trust Lands. Our office acknowledged the submittal on January 25th and no further comment was required, our office finding no objections to the submittal.

This does not constitute formal consultation under §36CFR800.4 or U.A.C. 9-8-404. If you have questions, please contact me at 801-533-3555 or Jim Dykmann at 801-533-3523.

Sincerely,

Lori Hunsaker
Deputy State Historic Preservation Officer
Archaeology

UTAH STATE
HISTORY

UTAH STATE HISTORICAL SOCIETY
ANTIQUITIES
HISTORIC PRESERVATION
RESEARCH CENTER & COLLECTIONS

300 S. RIO GRANDE STREET, SALT LAKE CITY, UT 84101-1182 · TELEPHONE 801 533-3500 · FACSIMILE 801 533-3503 · HISTORY.UTAH.GOV

UT SHPO

Joseph Zambelli - 11-0075

From: "Lori Hunsaker" <lhunsaker@utah.gov>
To: <joseph.zambelli@netl.doe.gov>
Date: 6/8/2011 12:35 PM
Subject: 11-0075
CC: "Lori Hunsaker" <lhunsaker@utah.gov>

Mr. Zambelli,

Apologies for our oversight on the above referenced case. We did not understand that NETL was a Federal Agency.

As per 36CFR800 we concur with your determination of No Historic Properties Effected.

If you have any questions, please do not hesitate to contact me.

Best,

Lori Hunsaker
Deputy State Historic Preservation Officer- Archaeology
Division of State History
300 Rio Grande Street
Salt Lake City, Utah 84101-1182
(801) 533-3555

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APPENDIX A2

Correspondence with Native American Tribes

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Staff-to-Staff Consultation Letters were sent to the following Native American Tribes on May 6, 2011 (the letter to the Kaibab Paiute Tribal Council is provided as a representative example):

Chemehuevi Indian Tribe of the Chemehuevi Reservation, California	Las Vegas Tribe
Colorado River Indian Tribe	Moapa Tribe
Fort McDowell Yavapai Tribe	Navajo Nation
Fort Mojave Indian Tribe	Paiute Indian Tribe of Utah
Havasupai Tribe	San Carlos Apache Tribe
Hopi Tribe of Arizona	San Juan Southern Paiute Tribe of Arizona
Hualapai Tribe	White Mountain Apache Tribe
Kaibab Band of Paiute Indians	Yavapai-Apache Tribe



May 6, 2011

Carmen Bradley, Chairperson
Kaibab Paiute Tribal Council
HC65, Box 2
Tribal Affairs Building
Fredonia, AZ 86022

Dear Ms. Bradley:

The U.S. Department of Energy (DOE) is considering a proposed action to provide financial assistance to Viresco Energy, LLC to support Viresco's construction and operation of a Coal and Biomass Fueled Pilot Plant in Kanab, Utah. The project would be located at: Sec 10, T44S, R6W, Salt Lake base and meridian, SW4NW4NW4, Section 10, Kane County, Utah (see the attached Site Location Map). This land is managed by Utah's School & Institutional Trust Lands Administration. A description and drawing of Viresco's proposed project are attached.

As the lead federal agency, DOE must comply with Sections 106 and 110 of the National Historic Preservation Act (NHPA) for this undertaking, as well as with the National Environmental Policy Act (NEPA) and the Endangered Species Act. Therefore, this letter is intended to initiate consultation with your tribal government under NHPA and NEPA. Based on a review of the currently available information, DOE concluded that the appropriate level of analysis for its proposed action and Viresco's proposed project would be an environmental assessment.

I would like to request any comments from your government regarding the potential significance of, and potential effects to, any traditional cultural properties, cultural landscapes, or archaeological sites that may be affected by the proposed project. DOE will hold a public scoping meeting to obtain the views of tribes, governmental agencies, private organizations, and the public regarding its proposed action and the scope of the environmental assessment. You are cordially invited to attend this meeting:

Date: May 18, 2011
Time: Open House: 5:00 to 7:00 pm
Formal Presentation: 7:00pm
Location: Kanab Middle School Cafeteria
690 S. Cowboy Way

Individuals wishing to present oral comments may either register at the meeting or register in advance by notifying DOE via phone (304.285.4913) or email (Joseph.Zambelli@NETL.DOE.GOV). You may also provide written comments by sending an email or letter to Mr. Joseph Zambelli, NEPA Document Manager, DOE-NETL, M/S:B07, 3610 Collins Ferry Road, P.O. Box 880, Morgantown, WV 26507-0880. The public comment period will end June 17, 2011.

I would be pleased to discuss the project and the environmental assessment with you. Please do not hesitate to call or email me if you have further questions. Your participation in this ongoing consultation process will be facilitated if we receive a written response on behalf of your tribe.

Thank you for your participation in this important process.

Sincerely,

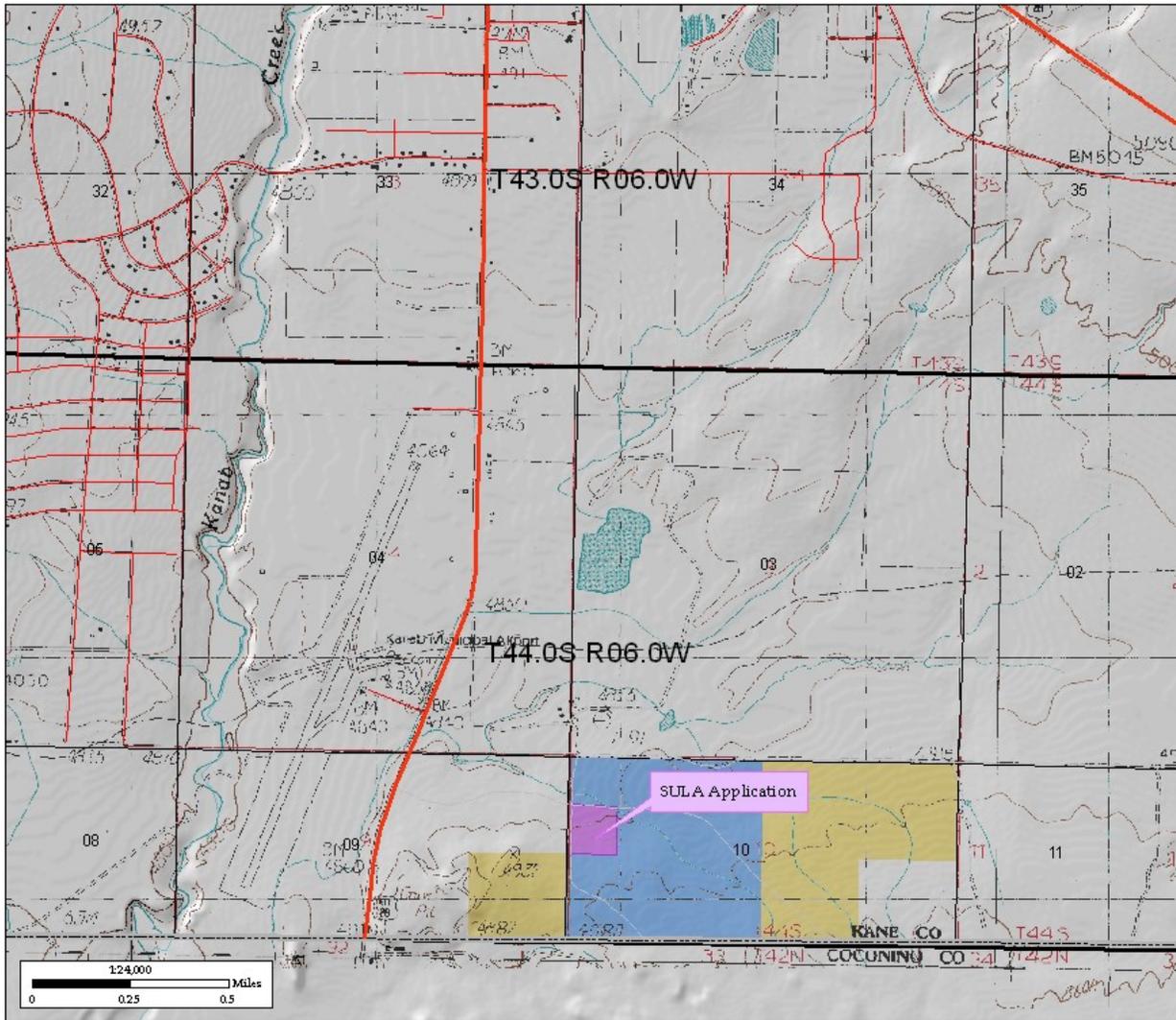
Joseph Zambelli
NEPA Document Manager

Enclosures

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Special Use Lease Agreement New Application

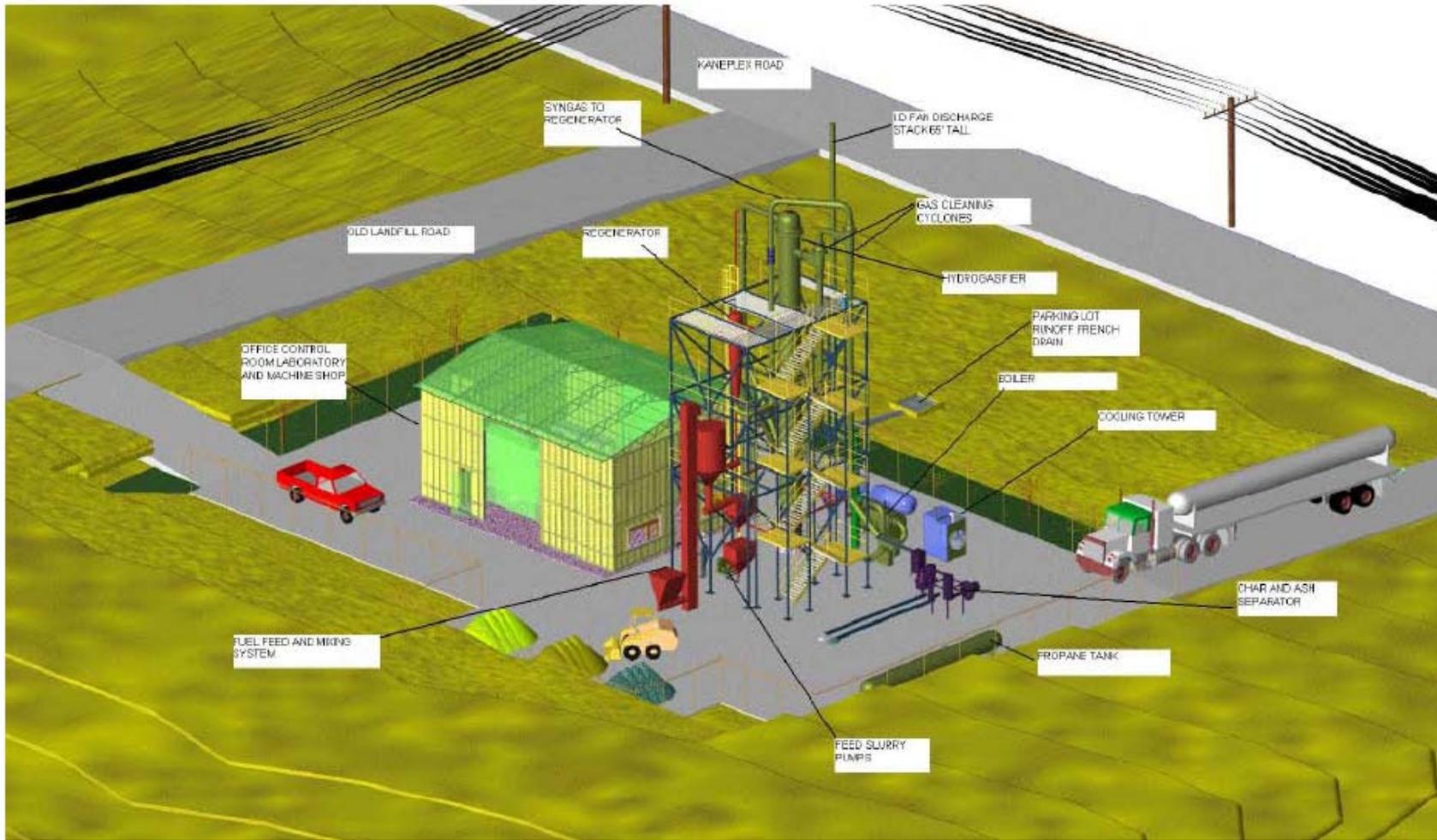
**Township 44 South, Range 6 West, SLB&M,
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May 24, 2010**

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- Land Ownership and Administration
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- Tribal Lands

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Site Location Map



Conceptual View of Pilot Plant Looking Northwest



LeRoy N. Shingoitewa
CHAIRMAN

Herman G. Honanie
VICE-CHAIRMAN

May 16, 2011

Joseph Zambelli, NEPA Document Manager, DOE-NETL, M/S:B07
Department of Energy, National Energy Technology Laboratory
3610 Collis Ferry Road, P.O. Box 880
Morgantown, West Virginia 26507

Dear Mr. Zambelli,

This letter is in response to your correspondence dated May 6, 2011, regarding the Department of Energy proposing to provide federal financial assistance to Viresco Energy, LLC for construction and operation of a coal and biomass fueled pilot plant in Kanab. The Hopi Tribe claims cultural affiliation to prehistoric cultural groups in Utah. The Hopi Cultural Preservation Office supports the identification and avoidance of prehistoric archaeological sites, and we consider the prehistoric archaeological sites of our ancestors to be "footprints" and Traditional Cultural Properties. Therefore, we appreciate your solicitation of our input and your efforts to address our concerns.

And therefore, the Hopi Cultural Preservation Office is interested in consulting on any proposal in Utah that has the potential to adversely affect prehistoric sites. Because this is a federally funded project that involves ground disturbing activities, to assist us in determining if this proposal may affect cultural resources significant to the Hopi Tribe, please provide us with a copy of the cultural resources survey report of the area of potential effect for review and comment.

In addition, if prehistoric cultural resources are identified that will be adversely affected by project activities, we will request ongoing consulting on any proposed treatment plans. For your information and future correspondences, LeRoy N. Shingoitewa is now Chairman of the Hopi Tribe. If you have any questions or need additional information, please contact Terry Morgart at 928-734-3619 or tmorgart@hopi.nsn. Thank you for your consideration.

Respectfully,



Leigh J. Kuwanyisiwma, Director
Hopi Cultural Preservation Office

xc: Utah State Historic Preservation Office



May 25, 2011

Leigh J. Kuwanwisiwma
Director
Hopi Cultural Preservation Office
The Hopi Tribe
P. O. Box 123
Kykotsmovi, AZ 86039

RE: Proposal for providing financial assistance to Viresco Energy, LLC for its proposed coal and biomass fueled project in Kanab, Utah.

Dear Mr. Kuwanwisiwma,

Thank you for your reply regarding the U.S. Department of Energy's proposal to provide financial assistance to Viresco Energy, LLC for its proposed coal and biomass fueled project in Kanab, Utah. Per your request, please find attached a copy of the Bighorn Archaeological Consultants, LLC cultural resource inventory report for the proposed site.

If you have any questions on this or any other item related to the proposed project, please do not hesitate to let me know via phone at 304.285.4913 or by email at joseph.zambelli@netl.doe.gov.

Sincerely,

A handwritten signature in black ink that reads "Joseph Zambelli". The signature is written in a cursive, flowing style.

Joseph Zambelli
NEPA Document Manager

Attachment



LeRoy N. Shingoitewa
CHAIRMAN

Herman G. Honanie
VICE-CHAIRMAN

June 6, 2011

Joseph Zambelli, NEPA Document Manager, DOE-NETL, M/S:B07
Department of Energy, National Energy Technology Laboratory
3610 Collis Ferry Road, P.O. Box 880
Morgantown, West Virginia 26507

Dear Mr. Zambelli,

Thank you for your correspondence dated May 25, 2011, with an enclosed cultural resources survey report, in response to our May 16, 2011 letter regarding the Department of Energy proposing to provide federal financial assistance to Viresco Energy, LLC for construction and operation of a coal and biomass fueled pilot plant in Kanab on State of Utah, School and Institutional Trust Lands. The Hopi Tribe claims cultural affiliation to prehistoric cultural groups in Utah. The Hopi Cultural Preservation Office supports the identification and avoidance of prehistoric archaeological sites, and we consider the prehistoric archaeological sites of our ancestors to be "footprints" and Traditional Cultural Properties. Therefore, we appreciate your continuing solicitation of our input and your efforts to address our concerns.

As we stated in our May 16, 2011 letter, the Hopi Cultural Preservation Office is interested in consulting on any proposal in Utah that has the potential to adversely affect prehistoric sites. We are aware of numerous prehistoric sites in the Kanab and Jackson Flat area.

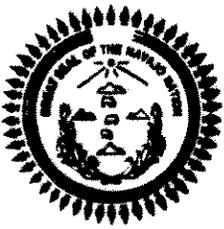
We have now reviewed the enclosed cultural resources survey report of the 10 acre area of potential effect that identifies a site described as an open lithic scatter, which is recommended as ineligible for listing on the National Register. Therefore, we have determined that this proposal is unlikely to affect cultural resources significant to the Hopi Tribe.

However, we concur with the recommendation that if any cultural features or deposits are encountered during project activities, the State Historic Preservation Office must be consulted to evaluate their nature and significance. If any Native American human remains or funerary objects are discovered during construction they shall be immediately reported as required by law. If you have any questions or need additional information, please contact Terry Morgart at 928-734-3619 or tmorgart@hopi.nsn. Thank you for your consideration.

Respectfully,

Leigh J. Kuwanwisiwma, Director
Hopi Cultural Preservation Office

xc: Utah State Historic Preservation Office



THE NAVAJO NATION

BEN SHELLY
PRESIDENT

REX LEE JIM
VICE-PRESIDENT

July 5, 2010

Joseph Zambelli
NEPA Document Manager
National Energy Technology Laboratory
3610 Collins Ferry Road
PO Box 880
Morgantown, WV 26507

Dear Mr. Zambelli:

Our apology for an oversight and missing the deadline date of your request, and that the Navajo Nation Historic Preservation Department – Traditional Culture Program (NNHPD-TCP) is in receipt of the proposed project where Viresco Energy, LLC is proposing to construct and operate a Coal and Biomass Fueled Pilot Plant in Kanab, Utah.

After reviewing your consultation documents, NNHPD-TCP has concluded the proposed undertaking/project area **will not impact** Navajo traditional cultural resources. The NNHPD-TCP, on behalf of the Navajo Nation has no concerns at this time.

However, the determination made by the NNHPD-TCP does not necessarily mean that the Navajo Nation has no interest or concerns with the proposed project. If the proposed project inadvertently discovers habitation sites, plant gathering areas, human remains and objects of cultural patrimony the NNHPD-TCP request that we be notified respectively in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA).

The NNHPD-TCP appreciates your consultation efforts, pursuant to 36 CFR Pt. 800.1 (c)(2)(iii). Should you have any additional concerns and/or questions, do not hesitate to contact me electronically at tony@navajohistoricpreservation.org or telephone at 928-871-7750.

Sincerely,

Tony H. Joe, Jr., Supervisory Anthropologist (*Section 106 Consultations*)
Historic Preservation Department – Traditional Culture Program

TCP 11-241
CC: Office File/Chrono



Please consider the environment before printing this e-mail.

From: Joseph Zambelli [mailto:Joseph.Zambelli@NETL.DOE.GOV]
Sent: Tuesday, February 01, 2011 12:00 PM
To: Leann
Cc: Elaine Everitt; John Ganz; Joseph Zambelli
Subject: RE: Viresco Energy

Hi LeAnn,

Thanks for your questions. DOE's NEPA regulations and policies can be found at <http://nepa.energy.gov/requirements.htm>. DOE consults with recognized tribes during its NEPA process. It requests that tribes provide information on properties of traditional religious and cultural significance in the vicinity of the proposed project, and on concerns they have about the project. We use this information to prepare our NEPA reviews and to meet our obligations under Section 106 of the National Historic Preservation Act and the Native American Graves Protection and Repatriation Act of 1990.

Any comments or concerns are included in the draft NEPA document, which is made available for public comment. All entities with which DOE has consulted, as well as any other agencies, groups or persons that may have an interest in the project, receive a copy of the draft document, which is also provided to local public libraries and posted on the following DOE web site:

<http://www.netl.doe.gov/publications/others/nepa/index.html>

DOE has not decided the level of NEPA review that will be required for this grant, but it is likely that an Environmental Assessment will be necessary.

In the context of a grant of financial assistance, DOE does not release funds to the recipient for activities that could limit the range of reasonable alternatives or have an adverse impact on the environment until the NEPA process is complete and DOE decides whether to provide financial assistance to the recipient's proposed project. Since I do not work with the grant and funding aspects of the project, you may want to contact the project manager, Elaine Everitt, at elaine.everitt@netl.doe.gov, for additional information. Keep in mind that DOE's participation in this project is limited to deciding whether to provide financial assistance. It would not be involved in the construction or operation of the facility, although these activities would be analyzed in the NEPA document.

If you have any other questions or need additional information, please let me know.

Thanks

Joe Zambelli

NEPA Document Manager

DOE-NETL

3610 Collins Ferry Road
P.O. Box 880
Morgantown, WV 26507-0880

Phone: 304.285.4913

Email: joseph.zambelli@netl.doe.gov

>>> Leann <kptenv@scinternet.net> 1/31/2011 2:35 PM >>>

Hi Joe;

I haven't worked with DOE before (we usually deal with BLM, USFS, NPS and FERC); can you provide me with a copy of your Tribal consultation and NEPA policies? Plus, can you tell me how the DOE grant process, which apparently Viresco secured, works – in particular, is the grant contingent on the results of the NEPA process?

Thanks!

LeAnn Skrzynski,

Environmental Program Director
Kaibab Band of Paiute Indians



Joseph Zambelli - RE: Viresco Energy

From: Leann <kptenv@scinternet.net>
To: Joseph.Zambelli@NETL.DOE.GOV
Date: 2/8/2011 4:05 PM
Subject: RE: Viresco Energy
CC: msavala@kaibabpaiute-nsn.gov; John.Ganz@NETL.DOE.GOV;
Elaine.Everitt@NETL.DOE.GOV

Mr. Zambelli, et al;

I appreciate the recognition that we must be consulted with under the NHPA and NAGPRA regarding cultural concerns. However, as a Federal agency DOE also has a Trust responsibility to involve us in this process under a government-to-government relationship above and beyond cultural or religious discussion. I feel as though we are already behind the ball because the project has reached the local Planning & Zoning Commission in Kanab without any notification from DOE to us of the project, and it appears as though any interaction with DOE may never have occurred had I not initiated the process.

To provide a little background about how NEPA, NHPA & NAGPRA have been botched in the very same location to this day as it concerns our Tribe, SITLA-leased lands and Viresco's advocate, Mike Noel, please review last night's Salt Lake news report:

<http://www.ksl.com/?nid=148&sid=14297785>

I also ask that you read our statement that is listed on the link, as well. Unfortunately, the news channel compounded the issue by identifying the location of the remains (this, in an area renowned for grave desecration for EBay sales) and we are consulting our litigators.

This is the atmosphere in which the Viresco Energy project is taking place and this is why we warned Utah Representative Mr. Noel a month ago that despite his promises to the Tribes on change following Jackson Flat, we could see the Viresco Energy project is following the same trajectory, a train wreck in progress.

Our Tribal Council meets every 3rd Thursday of each month and would benefit from a presentation even at this point in the process, prior to consultation, provided an agenda request has been submitted by the Monday one week preceding the Council. If you can make the March Council date, please make arrangements through our Tribal Secretary, DeeAnn Multine at dmultine@kaibabpaiute-nsn.gov or 928-643-7245.

Thank you,

LeAnn Skrzyński,

Environmental Program Director
Kaibab Band of Paiute Indians



May 6, 2011

LeAnn Shrzynski, Environmental Program Director
Kaibab Band of Paiute Indians
HC65, Box 2
Fredonia, AZ 86022

Dear Ms. Shrzynski:

The U.S. Department of Energy (DOE) is considering a proposed action to provide financial assistance to Viresco Energy, LLC to support Viresco's construction and operation of a Coal and Biomass Fueled Pilot Plant in Kanab, Utah. The project would be located at: Sec 10, T44S, R6W, Salt Lake base and meridian, SW4NW4NW4, Section 10, Kane County, Utah (see the attached Site Location Map). This land is managed by Utah's School & Institutional Trust Lands Administration. A description and drawing of Viresco's proposed project are attached.

As the lead federal agency, DOE must comply with Sections 106 and 110 of the National Historic Preservation Act (NHPA) for this undertaking, as well as with the National Environmental Policy Act (NEPA) and the Endangered Species Act. Therefore, this letter is intended to initiate consultation with your tribal government under NHPA and NEPA. Based on a review of the currently available information, DOE concluded that the appropriate level of analysis for its proposed action and Viresco's proposed project would be an environmental assessment.

I would like to request any comments from your government regarding the potential significance of, and potential effects to, any traditional cultural properties, cultural landscapes, or archaeological sites that may be affected by the proposed project. DOE will hold a public scoping meeting to obtain the views of tribes, governmental agencies, private organizations, and the public regarding its proposed action and the scope of the environmental assessment. You are cordially invited to attend this meeting:

Date: May 18, 2011
Time: Open House: 5:00 to 7:00 pm
Formal Presentation: 7:00pm
Location: Kanab Middle School Cafeteria
690 S. Cowboy Way

Individuals wishing to present oral comments may either register at the meeting or register in advance by notifying DOE via phone (304.285.4913) or email (Joseph.Zambelli@NETL.DOE.GOV). You may also provide written comments by sending an email or letter to Mr. Joseph Zambelli, NEPA Document Manager, DOE-NETL, M/S:B07, 3610 Collins Ferry Road, P.O. Box 880, Morgantown, WV 26507-0880. The public comment period will end June 17, 2011.

I would be pleased to discuss the project and the environmental assessment with you. Please do not hesitate to call or email me if you have further questions. Your participation in this ongoing consultation process will be facilitated if we receive a written response on behalf of your tribe.

Thank you for your participation in this important process.

Sincerely,

Handwritten signature of Joseph Zambelli

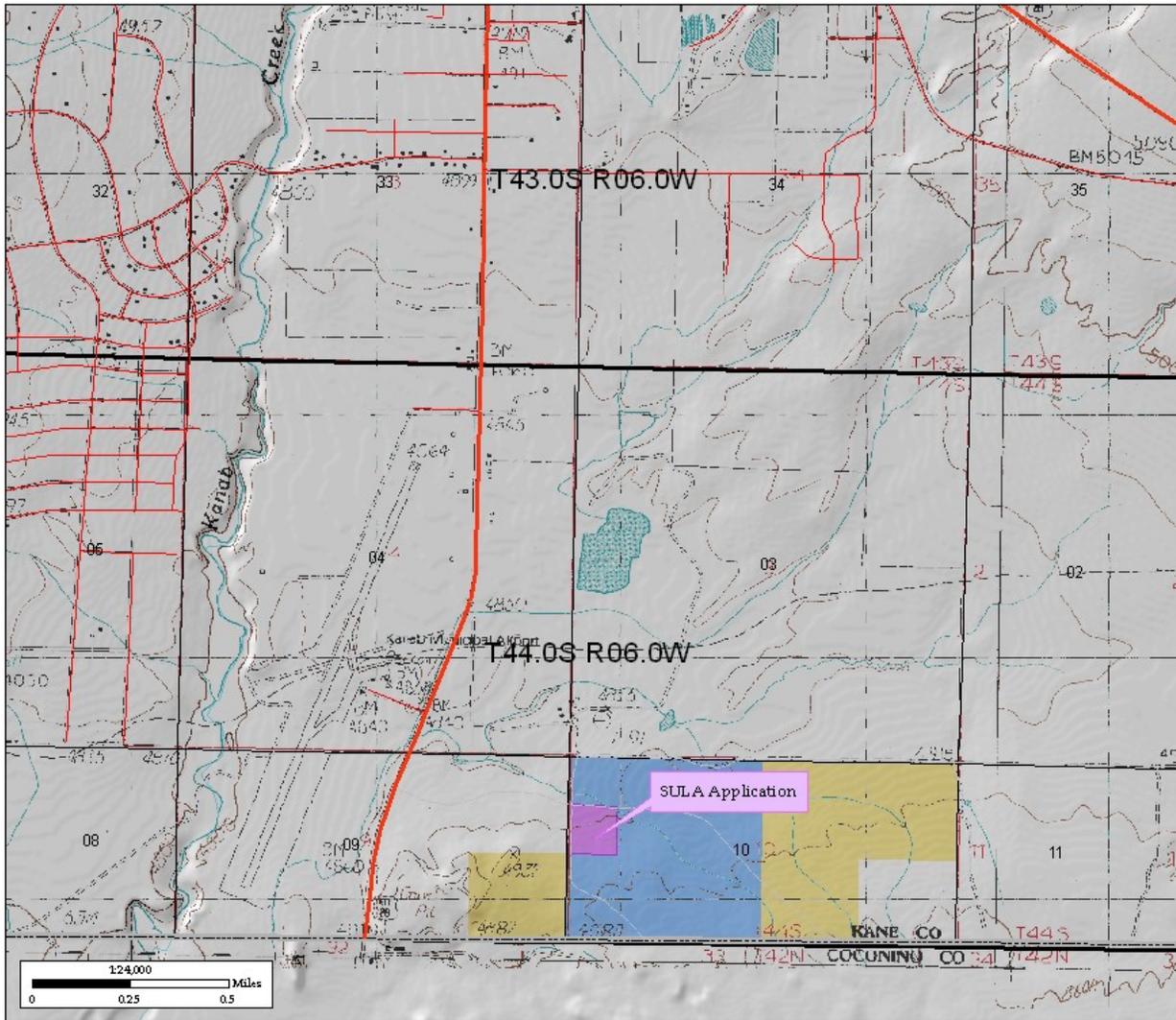
Joseph Zambelli
NEPA Document Manager

Enclosures

ATTACHMENT -- Project Description:

Viresco's project involves the design, construction, and testing of a pilot-scale steam hydrogasification facility to evaluate the enhanced conversion of carbonaceous material in a high-steam environment. During operation the pilot-scale hydrogasification process would convert carbonaceous feedstocks such as coal, and vegetative biomass, into synthesis gas suitable for further processing to liquid fuel or to substitute natural gas. The concept for the pilot plant involves a fluid bed gasifier fluidized by steam and recycled hydrogen with sand as the primary bed material and a heat carrier connected by a standpipe and return line to a fluid bed regenerator (combustor) that heats the sand using char carbon and air. The pilot-scale gasifier to be constructed and operated in this project would have a feedstock throughput of up to 5 tons-per-day when operating.

Field site preparation activities contracted by Viresco would include minor excavation on 0.75 acres with a slope of 10 percent, utility trenching and installation of a concrete slab measuring 40 feet by 45 feet. Viresco would then construct a building on the slab. Exterior production structures and machinery would occupy on an additional 5,000 square feet. Maximum height of structures would be 67 feet. Stockpiles of sand, coal and biomass material would be stored onsite.



Special Use Lease Agreement New Application

**Township 44 South, Range 6 West, SLB&M,
SW4NW4NW4, Section 10,
Kane County
May 24, 2010**

- Special Use Lease Agreement
- Land Ownership and Administration
- Bureau of Land Management
- Bureau of Reclamation
- Bureaufield-Jones Land Use Lands
- National Recreation Area
- National Parks, Monuments & Historic Sites
- National Forest
- National Wetlands Area
- National Wildlife Refuge
- Other Federal
- Military Reservations and Corps of Engineers Storage
- State Trust Lands
- State Sovereign Land
- State Parks and Recreation
- State Wildlife Reserve/Management Area
- Other State
- Tribal Lands

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Site Location Map



May 9, 2011

DeeAnn Multine, Tribal Secretary
Kaibab Band of Paiute Indians
Tribal Affairs Building
HC65, Box 2
Fredonia, AZ 86022

Dear Ms. Multine:

I have written to request that the following agenda item be added for the May 19th, 2011 Tribal Council Meeting to take place in Pipe Springs, Arizona:

- The U.S. Department of Energy (DOE) proposed action to provide financial assistance for construction and operation by Viresco Energy, LLC of a Coal and Biomass Fueled Pilot Plant in Kanab, Utah.

Depending on time available, DOE and Viresco would be pleased to make a brief (10- to 20-minute) presentation about Viresco's proposed project and the environmental assessment being prepared by DOE under the National Environmental Policy Act of 1969.

Attached is a brief project description, site location map, and conceptual drawing of Viresco's proposed project. Should you have any questions or feel additional materials for the meeting would be needed please do not hesitate to contact me via phone (304.285.4913), email (Joseph.Zambelli@NETL.DOE.GOV), or in writing by sending a letter to Mr. Joseph Zambelli, NEPA Document Manager, DOE-NETL, M/S:B07, 3610 Collins Ferry Road, P.O. Box 880, Morgantown, WV 26507-0880.

Thank you in advance for the opportunity of DOE to meet with the Kaibab Band of Paiute Indians on this subject.

Sincerely,

Joseph Zambelli, NEPA Document Manager

Cc: Manuel Savala, Tribal Chairman
msavala@kaibabpaiute-nsn.gov

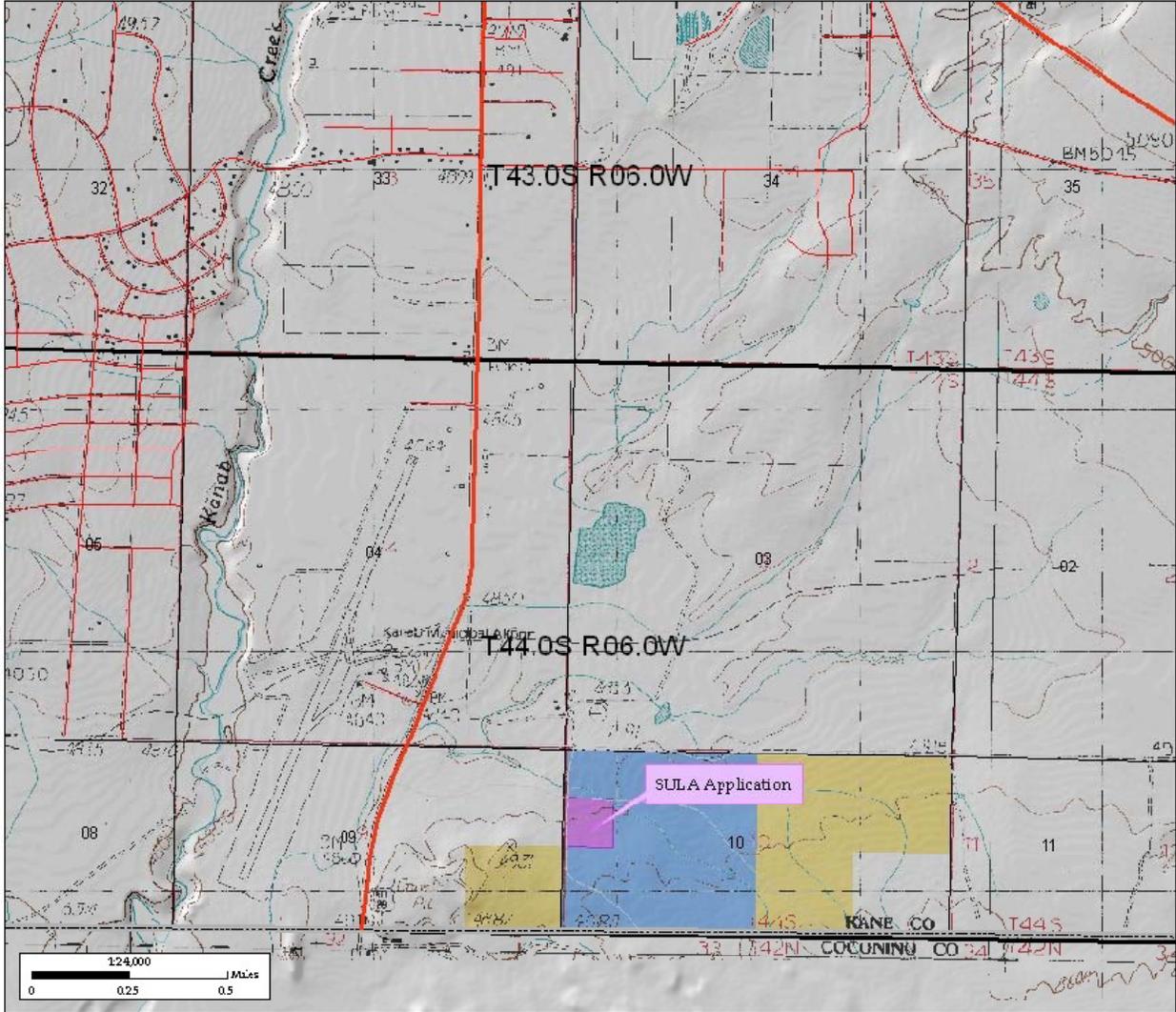
Enclosures

ATTACHMENT -- Project Description:

The project would be located at: Sec 10, T44S, R6W, Salt Lake base and meridian, SW4NW4NW4, Section 10, Kane County, Utah (see the attached Site Location Map). This land is managed by Utah's School & Institutional Trust Lands Administration. A conceptual drawing of Viresco's proposed project is also attached.

Viresco's project involves the design, construction, and testing of a pilot-scale steam hydrogasification facility to evaluate the enhanced conversion of carbonaceous material in a high-steam environment. During operation the pilot-scale hydrogasification process would convert carbonaceous feedstocks such as coal, and vegetative biomass, into synthesis gas suitable for further processing to liquid fuel or to substitute natural gas. The concept for the pilot plant involves a fluid bed gasifier fluidized by steam and recycled hydrogen with sand as the primary bed material and a heat carrier connected by a standpipe and return line to a fluid bed regenerator (combustor) that heats the sand using char carbon and air. The pilot-scale gasifier to be constructed and operated in this project would have a feedstock throughput of up to 5 tons-per-day when operating.

Field site preparation activities contracted by Viresco would include minor excavation on 0.75 acres with a slope of 10 percent, utility trenching and installation of a concrete slab measuring 40 feet by 45 feet. Viresco would then construct a building on the slab. Exterior production structures and machinery would occupy an additional 5,000 square feet. Maximum height of structures would be 67 feet. Stockpiles of sand, coal and biomass material would be stored onsite.



Special Use Lease Agreement New Application

**Township 44 South, Range 6 West, 10, SW1/4NW4, Section 10,
Kane County**

May 24, 2010

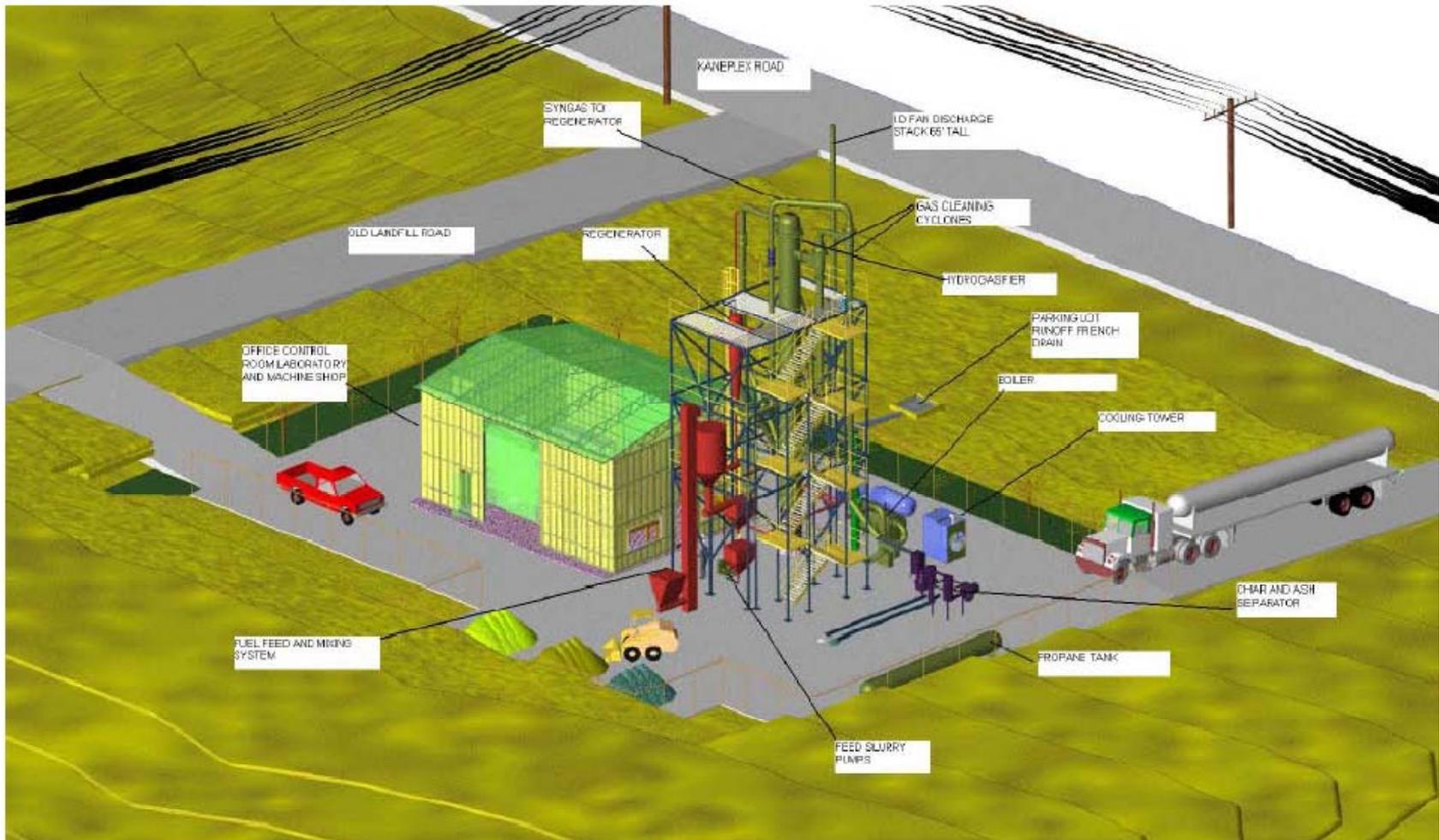
- Special Use Lease Agreement
- Bureau of Land Management
- Bureau of Reclamation
- National Recreation Area
- National Wildlife Refuge
- National Wetlands Area
- National Wildlife Refuge
- Military Reservations and Corps of Engineers
- State Trust Lands
- State Lands
- State Parks and Recreation
- State Wildlife Recovery/Management Area
- Other State
- Tribal Lands

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Site Location Map



Conceptual View of Pilot Plant Looking Northwest

June 13, 2011

Mr. Anthony Cugini
Director
US DOE – National Energy Technology Laboratory

Mr. Joseph Zambelli
NEPA Document Manager
US DOE – National Energy Technology Laboratory
3610 Collins Ferry Road
PO Box 880
Morgantown, WV 26507-0880

Submitted via email to: joseph.zambelli@NETL.DOE.GOV ,
Albert.petrasek@hq.doe.gov , and Anthony.Cugini@NETL.DOE.GOV

Re: **Utah Coal and Biomass Fueled Pilot Plant EA**

Dear Mr. Cugini and Zambelli;

We are writing to you regarding our first round of scoping comments plus our concerns on the way recent meetings were conducted for the Viresco Energy's Coal & Biomass-fueled pilot plant environmental analysis which is being proposed for Kanab, Utah .

As you are well aware, our Tribe has been anxious about this project since word of it appeared in the Salt Lake Tribune last fall. Our Reservation is about a mile from the site and our citizens often live in Kanab. As we were in the midst of unresolved issues resulting from an adjacent project, the Jackson Flat Reservoir, we knew that this project was one to watch and have tracked it closely.

We understand that NETL may not be well-acquainted with Tribal considerations but we would like to make the following points:

1. To this day, we have not received contact from any DOE Tribal Liaison. This is a critical oversight which we thought would be given a high priority as it was brought to DOE's attention in the meeting with our Tribal Council on May 19.
2. In addition, at the same meeting we made it clear that our expectation was to engage in a government-to-government exchange with the DOE Technical Manager, Elaine Everitt, rather than the company's proponent. We would like to have an informative discussion with both of these personnel as soon as practicable.
3. As noted, we were not appreciative that the public meeting held in Kanab indicated that consultation with our Tribe was already under way, although only minimal staff-to-

staff discussion by email had occurred. According to the definition of consultation in the DOE Indian policy, this is not recognized as such until agreements have been reached as to what constitutes official consultation. No agreement has been initiated to date.

4. The scoping meeting in Kanab was insufficient, as the visual aids were too vague to be of substance. While scoping meetings are meant to elicit comments for the environmental analysis to consider, asking a community to formulate questions in a vacuum is not good practice and could be considered misleading. For example, the by-products listed were given as hydrogen sulfide, carbon dioxide and slag which clearly was too simplistic for these purposes.
5. At the Kanab meeting and the Tribal meeting, there was virtually no detail of this specific project given and only vague generalities about the coal gasification process were provided. For instance, nothing addressed the potential ramifications of using biomass fuel or identified the actual biomass fuels that Viresco is proposing to use, where they plan to obtain them and how the waste from the process will be handled.

We are well-acquainted with the NEPA process as we work with many Federal agencies on a daily basis, including the Departments of the Interior, Agriculture, Housing and Urban Development, Defense and even DOE (FERC). We understand that all Federal agencies have their own policies which interpret NEPA but we are not being accorded the benefit of DOE's own consultation policy nor the recognition of Tribal sovereignty.

The presentations and materials provided were so cursory as to be meaningless. We ask that DOE return to our Tribal government and community with a well-developed scoping presentation, including the Tribal liaison, the DOE technical expert and a willingness to begin formal consultation.

Until such time as a new scoping meeting and government consultation can take place and to make sure no mistake is made in making deadlines within the current scoping process, we submit the following comments to be considered:

By funding this action, DOE is facilitating a project that has direct implications for our Tribe. We ask that a full Environmental Impact Statement be used to best characterize the cumulative effect this project may have on our Tribe and the region.

- Traditional religious practitioners of our Tribe indicate that the project site is a Sacred Site contiguous with the Jackson Flat reservoir area. As such, in addition to the typical assessment of cultural resources, we request that DOE prepare a Social Impact Assessment to include the relationship of our people with that environment and the project's cultural and social effects.

As DOE recognizes Tribal governments as sovereign entities with primary authority and responsibility for the protection of the health, safety and welfare of their citizens plus the right of each Indian nation to protect its natural and cultural resources, we have many concerns above and beyond the cultural ones typically associated with Tribes.

- What is the source and composition of each feedstock ?
- How will each potential feedstock be stored prior to its use and how much fugitive dust will result (from storage plus milling/grinding and any other processing of feedstocks)?
- Will the carbon dioxide produced be released or sequestered, and if plans are to sequester it, where would that occur? We ask that a different location be considered, where carbon dioxide capture and storage could be included in the demonstration.
- The funds that have been earmarked for this experimental process could be better used to increase efficiency or further the development of renewable technology; we would like a comparison of these processes made as an alternative for study in an EIS, particularly as the state of technology indicates the sequestration inherently necessary for coal gasification production to be considered a “clean technology” is not viable
- We ask for a complete analysis of the liquid aspects of this project, including an identification of all water or liquids, where and in what quantity they will be obtained, how it will be used in the process, any changes (chemical, electrical , thermal, etc.) that will occur, how it will be processed or treated and what triggers each of those processes before it is released, all potential releases to the environment, and a plan for remediation of all resulting liquids/water that may enter the water table, municipal water treatment, surface or ground water systems from all potential feedstocks or commingled feedstocks, and how these releases can affect wildlife, air & water quality, riparian ecosystems, and human health.

Note: Human health impacts need to quantify mortality and morbidity plus sub-lethal health threats such as heart and lung disease, bronchitis and asthma, with the limitations of rural health-care, on a population already compromised by the physiological effects of high elevation.

- Identification of all compounds, toxic or hazardous materials, and radioactive elements used for, released and/or generated by the process, and how these can affect wildlife, riparian ecosystems, air & water quality, and human health.
- Please model all impacts (including health and economic) resulting from weather inversions and frequency of plume blight, and how these can affect wildlife, riparian ecosystems, and air & water quality.
- Please perform a Greenhouse Gas emission analysis including all fuels used during initiation of the gasification process and the cumulative transport of feedstocks and wastes.
- A study of odor impacts associated with the processing, and gasification, of each of the feedstocks or commingled feedstocks and how these can affect wildlife, riparian ecosystems, air & water quality, and human health.
- A study of noise impacts associated with the processing, and gasification, of each of the feedstocks or commingled feedstocks and how these can affect wildlife, riparian ecosystems, air & water quality, and human health.
- We request a scenic resource impact analysis that will take into consideration the impacts from exterior lighting, opacity effects from emissions, light pollution in a community intent on Dark Sky qualities, regional haze effects on visibility, windrose assessment to determine wind patterns over a given year, and the height of stacks and other structures in a highly visible area with a tourism-based economy and how these can affect wildlife, riparian ecosystems, air & water quality, and human health.
- Please provide a clear analysis of the triggers for further regulation and the regulatory agencies responsible for oversight on all emissions, residuals or wastes resulting from all potential feedstocks or commingled feedstocks and their effects on the environment.
- DOE should perform a comparison that would evaluate the impacts on this greenfield site as compared to a brownfield site in an urban area
- We request preparation of adequate emergency response plans generated to handle all foreseeable emergencies

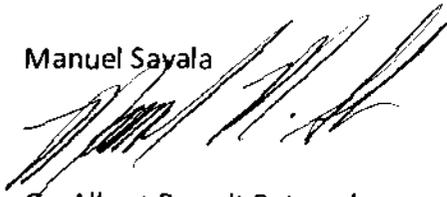
- We request that DOE stay the funding decision on this project until a Finding of No Significant Impact or Record of Decision is completed.

In closing, we ask that a full Environmental Impact Statement be used to best characterize the affect this project may have on our Tribe and the region. We wish to express our appreciation for your consideration in reviewing these comments and working with you once consultation is initiated.

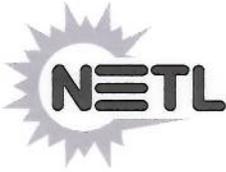
Please contact our Tribal Secretary to schedule a scoping meeting with our Tribal Council and a request for consultation.

Regards,

Manuel Sayala

A handwritten signature in black ink, appearing to read 'Manuel Sayala', written over a light blue horizontal line.

Cc: Albert Brandt Petrsek



August 1, 2011

Manuel Savala
Chairman of Tribal Council
Kaibab Band of Paiute Indians
Tribal Affairs Building
HC65, Box 2
Fredonia, AZ 86022

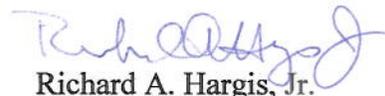
Re: Department of Energy Presentation at Public Scoping Meeting for the Utah Coal and Biomass Fueled Pilot Project on May 18, 2011

Dear Chairman Savala,

I understand that your Tribal Council has objected to statements that Department of Energy (DOE) representatives made to the citizens of Kanab during the May 18th scoping meeting regarding the status of DOE consultations with the Kaibab Band of the Paiute Indians. We regret that these statements implied that DOE had initiated formal government-to-government consultation with your tribe prior to that public meeting. We should have made it clear that only staff-to-staff level contact had occurred. In most cases, our interaction with tribal governments during our National Environmental Policy Act (NEPA) review has occurred at the staff-to-staff level and a formal government-to-government consultation has not been requested. In this case, however, please be assured that we understand the importance of your tribal government's request for formal government-to-government consultation and that we understand that this level of consultation has now been initiated with DOE participation in your tribal council meeting held on July 21, 2011.

We will ensure that DOE representatives correct any misunderstandings and present an accurate status of DOE's consultation efforts during the public meeting on the Draft Environmental Assessment for the Utah Coal and Biomass Fueled Pilot Project currently being planned for later this year.

Sincerely,



Richard A. Hargis, Jr.

Director

Environmental Compliance Division

e-mail cc: D. Conrad, DOE/HQ; E. Everitt, NETL; J. Zambelli, NETL

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APPENDIX B

Plants and Animals of Cultural Concern to the
Kaibab Band of Paiute Indians of Northern Arizona

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Paiute Plants

Tribal Name	Scientific Name	Common Name
NR	<i>Abutilon incanum</i>	Indian mallow
Uaahu	<i>Acacia greggii</i>	Catclaw acacia
Kaiva uusiv	<i>Agave utahensis</i> var. <i>kaibabensis</i>	Kaibab agave
Yaant	<i>Agave utahensis</i> var. <i>utahensis</i>	Utah agave
Ketsiav, Tempisangwavi, Tumpisangwav	<i>Ambrosia dumsoa</i>	White bursage
Sangwav	<i>Artemisia bigelovii</i>	Bigelow sagebrush
Chumav	<i>Artemisia filifolia</i>	Sand sagebursh
NR	<i>Astragalus praelongus</i>	Rattleweed, locoweed
NR	<i>Astragalus tephrodes</i>	
Sikumpe, tono	<i>Atriplex canescens</i>	Four-wing saltbrush
Kanave, Koauw kanav	<i>Baccharis salicifolia</i>	Seepwillow
Unapi, Unapyi op	<i>Battarea stevini</i>	Mushroom
Mausi	<i>Cercis occidentalis</i> var. <i>orbiculata</i>	California redbud
	<i>Chilopsis linearis</i>	Desert willow
Sikumpe	<i>Chrysothamnus nauseus</i>	Rubber rabbitbursh
Manavip	<i>Cirsium</i> sp.	Pink thistle
	<i>Clematis ligusticifolia</i>	Western virgin's bower, Wild clematis
Momop, mainowip, momonp	<i>Datura meteloides</i> (=D. <i>wrightii</i>)	Sacred datura, jimsonweed
Aku'u, ku'u	<i>Descurainia pinnata</i>	Yellow tansy mustard
Sakwapi	<i>Dyssodia pentachaeta</i> (D. <i>thurberi</i>)	Fetid marigold
Manav	<i>Echinocereus engelmannii</i>	Engelman hedgehog cactus
Chuamanav, i'mamanavi	<i>Echinocereus triglochidiatus</i>	Claretcup cactus
Sana'ich, Tuwich	<i>Encelia farinosa</i>	White brittlebush
Sana'ich, tuwich	<i>Encelia frutescens</i> var. <i>resinosa</i>	Brittlebush
Tup	<i>Ephedra nevadensis</i>	Nevada Indian tea
Yatup, tutup	<i>Ephedra torreyana</i>	Torrey Indian tea
	<i>Ephedra viridis</i>	Indian tea
Paxwav, Sakwa'ivi, Sakwa'ivip	<i>Equisetum laevigatum</i>	Smooth scouring rush
Muup	<i>Fallugia paradoxa</i>	Apache plume
Tase, Tash, Manav Avatu tash	<i>Ferocactus acanthodes</i>	California barrel cactus
Tuav	<i>Franxinus pennsylvanica</i>	Velvet ash
Yainup, waarump	<i>Gutierrezia microcephala</i>	Three-leaf snakeweed, Matchweed
Pauv	<i>Juncus acutus</i> var. <i>sphaerocarpus</i>	Spiny rush
Yatump	<i>Larrea tridentata</i>	Creosote bush, Greasewood
Pa'up, Pa'uv, U'up	<i>Lycium andersonii</i>	Wolfberry
U'up	<i>Lycium fremontii</i>	Fremont wolfberry
Paakwanav	<i>Mentha arvensis</i>	Field mint
Tukwivi, tuwkv, toxo'owatsiv	<i>Miravilis multiflora</i>	Colorado four-o'clock
Wichavi ma'ap	<i>Muhlenbergia asperifolia</i>	Scratch grass
Pamav, paenaxenar	<i>Nasturtium officinale</i>	Watercress
Ko'api, Nengweko'ap	<i>Nicotiana trigonophylla</i>	Desert tobacco
Ata wiisiv	<i>Nolina microcarpa</i>	Beargrass
Sixo'	<i>Oenothera pallida</i>	Pale evening primrose
Manav	<i>Opuntia basilaris</i>	Beavertail cactus
Yuavip	<i>Opuntia erinacea</i>	Grizzlybear cactus
Manav	<i>Opuntia phaeacantha</i>	Engelmann prickly pear

Tribal Name	Scientific Name	Common Name
Wa'iv	<i>Oryzopsis hymenoides</i>	Indian ricegrass
Patowanamauv	<i>Parthenocissus vitacea</i>	Virginia creeper
Pajama	<i>Phragmites australis</i>	Giant common reed
Soovip	<i>Populus fremontii</i>	Fremont cottonwood
Opimp, opimpe	<i>Prosopis glandulosa</i> var. <i>torreyana</i>	Torrey mesquite
Suuv	<i>Rhus trilobata</i> var. <i>simplicifolia</i>	Squaw bush
Su'uv, Shuuvi	<i>Rhus trilobata</i> var. <i>trilobata</i>	Squaw bush
Ku'u, nampitu	<i>Rumex hymenosepalus</i>	Wild rhubarb
Kanav	<i>Salix exigua</i>	Coyote willow
Paakanav	<i>Salix gooddingii</i>	Goodding willow
Manavip, manav	<i>Salsola iberica</i>	Russian thistle, thumbleweed
Nengweko'ap	<i>Salvia davidsonii</i>	Davidson sage
Kanareko'ap	<i>Salvia dorrii</i>	Purple sage, desert sage
Manav	<i>Sclerocactus parviflorus</i>	Pineapple cactus, Devil's claw
Mamuiv	<i>Sonchus oleraceus</i>	Common sow-thistle
Kupinav, Tupwiv	<i>Sphaeralcea ambigua</i>	Desert globemallow
Temar, Chemar	<i>Stanleya pinnata</i>	Prince's plume, Indian spinach
Tuwisanakup	<i>Stephanomeria tenuifolia</i>	Wire lettuce
Pa'ante maav	<i>Tamarix chinensis</i>	Tamarisk, salt cedar
NR	<i>Tessaria sericea</i>	Arrowweed
Kaiva sixwana	<i>Thamnosma montana</i>	Turpentine broom
Pa'ante sawap, pantusahwav,to'ovi,tonov Iyaavi, pukwupe, kuripsup, we'ump	<i>Typha latifolia</i>	Broad-leaf cattail
Uusiv, wiisiv	<i>Vitis arizonica</i>	Canyon grape
Tachempi, Uusiv, Wiisiv	<i>Yucca angustissima</i>	Narrowleaf yucca
NR	<i>Yucca baccata</i>	Banana yucca
	<i>Yucca whipplei</i>	Whipple yucca

July 3, 2008

Animals of Cultural Concern to the Kaibab Band of Paiute Indians of Northern Arizona,
this list is not in any kind of order.

Mule Deer	Lizards
Rabbits, incl. cottontails	Gophers
Most small birds	owls
Chipmunks	Mourning Doves
Coyotes	Crickets
Fox	Grasshoppers
Badgers	Bighorn sheep
Squirrels (Flying and Non Flying)	Buffalo
Eagles	Woodpeckers
Mice/Rats	Antelope
Porcupine	Bobcats/Lynx
Bats	Mountain Lions
Crows/Ravens	Ducks
All Snakes (i.e. Rattle, Blow)	All Hawks
Condors	Prairie Dogs
Skunks	Fish
Raccoons	Frogs

Danny Bulletts, Jr.
Director of Fisheries, Wildlife & Parks
Kaibab Band of Paiute Indians
HC 65 Box 2
Fredonia, Arizona 86022

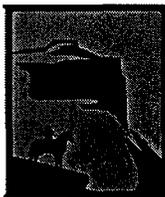
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APPENDIX C

Will-Serve Letters from Utility Suppliers

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Mayor
Nina Laycook
City Manager
Duane Huffman
Treasurer
RaeLene Johnson
City Attorney
Van Mackelprang



KANAB
— UTAH —

City Council
James G. Sorenson
Shaun Smith
Ed Meyer
Steven R. Mower
Anthony Chatterley

October 13, 2010

Subject: Can & will Serve Letter – 400 East Kaneplex Road (Viresco Energy Project)

To whom it may concern:

This Letter confirms that Kanab City can and will furnish water and sewer service to the above project contingent upon the placement of necessary infrastructure.

Please contact me with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Duane Huffman', written in a cursive style.

Duane Huffman
City Manager

– A Western Classic –

Will Serve Letter

To: Viresco Energy LLC.
Attn: Jim Guthrie/Arun Raju
From: Rob Wolfley, Garkane Propane.
Date: 6/15/11
Re: Kanab Pilot Plant will serve letter.

Gentlemen,

Per your request we are pleased to provide you with a will serve letter in support of your proposed Kanab pilot plant operation.

Garkane Propane has a bulk facility located in Kanab and can store approximately 30,000 gallons of LP gas. We have the ability to supply you with all your propane requirements. We currently serve many local customers in the Kanab area and are please to offer our service you.

We appreciate the opportunity to serve your LP gas Needs.

Rob Wolfley

Garfield Area Manager.

435-735-4280

rwolfley@garkaneenergy.com

August 8, 2011

Arun SK Raju, Ph.D.,
Director of Research,
Viresco Energy, LLC,
1401 Research Park Dr., Suite 400,
Riverside, CA - 92507
E-mail: arun.raju@virescoenergy.com

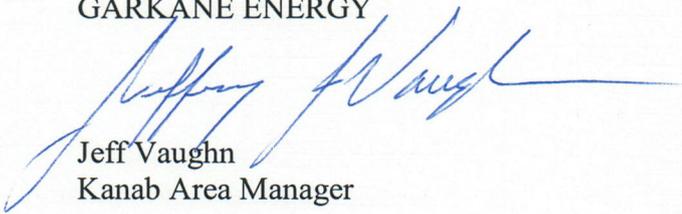
To Whom It May Concern:

With some improvements made to the electrical system, Garkane Energy has the means to provide 225kW of power for the electrical service needs for the "Synthetic Fuel Coal Gasification Research and Development Facility" project, located in the Kane Plex Industrial Center, 400 E. Kane Plex Drive. The electrical service is contingent on easements, necessary system improvements and a 3-phase 12.5kV power line constructed and ran to the site.

Should you have any questions, please let us know.

Sincerely,

GARKANE ENERGY

A handwritten signature in blue ink, appearing to read "Jeff Vaughn", is written over the printed name and title.

Jeff Vaughn
Kanab Area Manager

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APPENDIX D

Air Quality Documentation

Air Emissions Calculations (D1), Small Source Exemption Registration (D2)

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APPENDIX D1

Air Emissions Calculations

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D.1 Air Emissions Calculations

Table D-1 Construction Equipment Use				
Equipment type	Number of units	Days on site	Hours per day	Operating hours
Graders Composite	1	60	7	420
Excavators Composite	1	60	7	420
Rubber Tired Dozers Composite	2	60	7	840
Off-Highway Trucks Composite	2	60	7	840
Air Compressors	1	90	7	630
Cement & Mortar Mixers	1	90	7	630
Cranes	1	60	7	420
Generator Sets	1	120	7	840
Tractors/Loaders/Backhoes	3	120	7	2520

Table D-2 Construction Equipment Emission Factors (lbs/hour)						
Equipment	CO	NO_x	VOC	SO_x	PM₁₀	PM_{2.5}
Graders Composite	0.6561	1.6191	0.1936	0.0015	0.0840	0.0840
Excavators Composite	0.5828	1.3249	0.1695	0.0013	0.0727	0.0727
Rubber Tired Dozers Composite	1.5961	3.2672	0.3644	0.0025	0.1409	0.1409
Off-Highway Trucks Composite	0.8499	2.7256	0.2730	0.0027	0.0989	0.0989
Air Compressors	0.3782	0.7980	0.1232	0.0007	0.0563	0.0563
Cement and Mortar Mixers	0.0447	0.0658	0.0113	0.0001	0.0044	0.0044
Cranes	0.6011	1.6100	0.1778	0.0014	0.0715	0.0715
Generator Sets	0.3461	0.6980	0.1075	0.0007	0.0430	0.0430
Tractors/Loaders/Backhoes	0.4063	0.7746	0.1204	0.0008	0.0599	0.0599

Source: CARB, 2007.

Table D-3 Construction Equipment Emissions (tpy)						
Equipment	CO	NO_x	VOC	SO_x	PM₁₀	PM_{2.5}
Graders Composite	0.1378	0.3400	0.0406	0.0003	0.0176	0.0176
Excavators Composite	0.1224	0.2782	0.0356	0.0003	0.0153	0.0153
Rubber Tired Dozers Composite	0.6703	1.3722	0.1530	0.0010	0.0592	0.0592
Off-Highway Trucks Composite	0.3569	1.1448	0.1146	0.0011	0.0415	0.0415
Air Compressors	0.1191	0.2514	0.0388	0.0002	0.0177	0.0177
Cranes	0.1262	0.3381	0.0373	0.0003	0.0150	0.0150
Generator Sets	0.1454	0.2932	0.0451	0.0003	0.0181	0.0181
Tractors/Loaders/Backhoes	0.5120	0.9759	0.1517	0.0010	0.0754	0.0754
Total Equipment Emissions	2.1902	4.9938	0.6169	0.0045	0.2599	0.2599

Table D-4 Delivery of Equipment and Supplies							
Number of Deliveries	2						
Number of Trips	2						
Miles Per Trip	60						
Days of Construction	120						
Total Miles	28800						
Pollutant	CO	NO_x	VOC	SO_x	PM₁₀	PM_{2.5}	CO₂
Emission Factor (lbs/mile)	0.0219	0.0237	0.0030	0.0000	0.0009	0.0007	0.0219
Total Emissions (lbs)	632.14	682.92	86.19	0.74	24.65	21.29	632.14
Total Emissions (tpy)	0.3161	0.3415	0.0431	0.0004	0.0123	0.0106	0.3161

Source: CARB, 2007.

Table D-5 Surface Disturbance						
TSP Emissions	80	lb/acre				
PM ₁₀ /TSP	0.45					
PM _{2.5} /PM ₁₀	0.15					
Period of Disturbance	30	days				
Capture Fraction	0.5					
Building/CHP Plant	Area (acres)	TSP (lbs)	PM ₁₀ (lbs)	PM ₁₀ (tons)	PM _{2.5} (lbs)	PM _{2.5} (tons)
Construction	0.1	240	108	0.05	8	0.001
Total	0.1	240	108	0.05	8	0.001

Sources: USEPA, 1995 and USEPA, 2005.

Table D-6 Worker Commutes							
Number of Workers	30						
Number of Trips	2						
Miles Per Trip	40						
Days of Construction	120						
Total Miles	288000						
Pollutant	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}	CO ₂
Emission Factor (lbs/mile)	0.0105	0.0011	0.0011	0.0000	0.0001	0.0001	0.0105
Total Emissions (lbs)	3037.95	317.63	310.81	3.10	24.50	15.24	3037.95
Total Emissions (tpy)	1.5190	0.1588	0.1554	0.0015	0.0122	0.0076	1.5190

Source: CARB, 2007.

Table D-7 Total Construction Emissions (tpy)							
Activity/Source	CO	NO _x	VOC	SO _x	PM ₁₀	PM _{2.5}	
Construction Equipment	3.8142	8.8763	1.0617	0.0079	0.4396	0.4396	
Delivery of Equipment and Supplies	0.3161	0.3415	0.0431	0.0004	0.0123	0.0106	
Worker Commutes	1.5190	0.1588	0.1554	0.0015	0.0122	0.0076	
Total Construction Emissions	5.6493	9.3765	1.2602	0.0099	0.4642	0.4579	

Table D-8 Materials Used and Produced				
Inputs				
Coal	424	lb/hr dry	192.32	kg/hr
Water	1083	lb/hr	491.24	kg/hr
Natural gas	153	lb/hr	69.40	kg/hr
Sand	1	lb/hr	0.45	kg/hr
Outputs				
Wastewater	22	lb/hr	9.98	kg/hr
Solid waste	22	lb/hr	9.98	kg/hr
Air emissions				
SO ₂	3.2	lb/hr	1.45	kg/hr
NO	3.7	lb/hr	1.68	kg/hr
CO ₂	1509	lb/hr	684.47	kg/hr
CO	7	lb/hr	3.18	kg/hr

Table D-9 Projected Operational Emissions (tpy)				
Criteria Pollutant	Flare Exhaust	Regenerator Exhaust	Boiler	Total
SO ₂	1.16			1.16
CO	3.5			3.5
NO _x	1.22		0.02	1.24
PM ₁₀	0.01	0.01		0.02

APPENDIX D2

Small Source Exemption Registration

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State of Utah

GARY R. HERBERT
Governor

GREG BELL
Lieutenant Governor

Department of
Environmental Quality

Amanda Smith
Executive Director

DIVISION OF AIR QUALITY
Cheryl Heying
Director

Small Source Registration

DAQE-EN0143320001-10

September 7, 2010

Harry Gatley
Viresco Energy
1451 Research Park Drive #200
Riverside, CA 92507

Dear Mr. Gatley:

Re: Request for Evaluation of Compliance with Rule R307-401-9, UAC: Exemptions and Special Provisions - Small Source Exemptions - De Minimis Emissions
Project Fee Code: N014332-0001

The Utah Department of Environmental Quality, Division of Air Quality (DAQ) has reviewed your letter, dated August 19, 2010, requesting a small source exemption for Viresco Energy: Hydrogasification Fluidized-Bed Pilot Facility located at: Sec 10, T44S, R6W, Salt Lake base and meridian, SW4NW4NW4, Section 10, Kane County, and determined that the small source exemption applies as long as the above-referenced equipment and associated processes are operated as specified in the Registration Request.

The small source exemption does not exempt a source from complying with other applicable federal, state, and local regulations including the current Utah Administrative Code. If you change your operation such that there is an increase in the emissions submitted to DAQ, it is recommended that you notify us as an Approval Order may be required.

The fee for issuing the small source/de minimis designation is the cost, as authorized by the Utah Legislature of the actual time spent by the Review Engineer and all other staff on the project, and a one-time filing fee. Payment should be sent to the DAQ upon receipt of the invoice.

195 North 1950 West • Salt Lake City, UT
Mailing Address: P.O. Box 144820 • Salt Lake City, UT 84114-4820
Telephone (801) 536-4000 • Fax (801) 536-4099 • T.D.D. (801) 536-4414

www.deq.utah.gov

Printed on 100% recycled paper

DAQE-EN0143320001-10

Page 2

Thank you for informing the DAQ of this process. If you have any additional questions, please contact Chad Harris at (801) 536-4069.

Sincerely,

M. Cheryl Heying, Executive Secretary
Utah Air Quality Board



Timothy R. Andrus, Manager
New Source Review Section

MCH:TRA:CDH:sa

Attachments: Small Source Exemption Registration Request and attached forms



Utah Division of Air Quality SMALL SOURCE EXEMPTION REGISTRATION

Revised: 6/21/06

Businesses **eligible** for this exemption shall **not**: 1) **emit more than 5 tons per year** of each of the following pollutants: sulfur dioxide (SO₂), carbon monoxide (CO), nitrogen oxides (NO_x), particulate matter (PM₁₀), ozone (O₃), or volatile organic compounds (VOCs) or 2) **emit more than 500 pounds per year of any single hazardous air pollutant (HAP)**, and **emit more than 2000 pounds per year for any combination of HAPs**, or 3) emit less than 500 pounds per year of any air contaminant not listed in (1)(or (2) above and less than 2000 pounds per year of any combination of air contaminants not listed in (1) or (2) above.

Please keep copies of the registration notice and worksheets on site at your business to verify your permit exemption status. Please be aware that the small source exemption only exempts your business from the permitting requirements of R307-401-5 through 8 of the Utah Administrative Code, not other applicable air quality regulations.

<p>1. Business Name and Mailing Address: <u>VIRESCO ENERGY</u> <u>1451 RESEARCH PARK DR #200</u> <u>RIVERSIDE, CA 92507</u></p> <p>Phone # <u>(951) 784-7238</u> Fax # <u>(951) 784-7287</u></p>	<p>2. Business Contact for Air Quality Issues: <u>HARRY GATLEY</u> <u>4876 DAMON CIRCLE</u> <u>HOLLaday, UT 84117</u> <u>(801) 272-2411</u></p> <p>Phone # <u>(801) 243-5373</u> Fax # <u>(951) 784-7287</u></p>
<p>3. Owners Name and Mailing Address: <u>VIRESCO ENERGY</u> <u>1451 RESEARCH PK. DR. #200</u> <u>RIVERSIDE, CA 92507</u></p> <p>Phone # <u>(951) 784-7238</u> Fax # <u>(951) 784-7287</u></p>	<p>4. Business Location (street address if different from above and directions to site): <u>TOWNSHIP 44 SOUTH</u> <u>RANGE 6 WEST, SLB&M</u> <u>SW4NW4NW4, SECT 10</u></p>
<p>5. County where business is located: <u>KANE COUNTY</u></p>	<p>6. Start-up Date of Business: Month: _____ Year: <u>2011</u></p>
<p>7. Briefly describe your process by describing end products, raw materials, and process equipment used at your business. Attach additional sheets if necessary. <u>HYDROGASIFICATION FLUIDIZED BED</u> <u>PILOT FACILITY RAW MAT. - COAL, BIOMASS, LIMESTONE</u> <u>- NO PRODUCTS: EQUIPMENT: BOILER, GASIFIER,</u> <u>CONDENSER, H₂ SEPARATOR, GTL PROCESS MAT. HANDLING</u> <u>P&ID'S AVAILABLE ON REQUEST</u></p>	

AUG 19 2010
 DIVISION OF AIR QUALITY



8. List any pollution control equipment: Low NO_x BURNER

9. Typical operating Schedule: 8h/day 5 days / week

10. Annual Emission Rates:
 Provide an estimate of the actual annual emissions of the following air contaminants from your business. Emission calculation worksheets are available for some common processes.
Please attach all worksheets and calculations.

Sulfur Dioxide (SO ₂).....	<u>0</u> lbs / year	Particulate Matter (PM ₁₀)	<u>0</u> lbs / year
Carbon Monoxide (CO)	<u>553</u> lbs / year	Ozone (O ₃)	<u>0</u> lbs / year
Nitrogen Oxides (NO _x)	<u>118</u> lbs / year	Volatile Organic Compounds (VOC)	<u>0</u> lbs / year
Other Air Contaminants	<u>0</u> lbs / year	Describe	<u>see Attached</u>

HAZARDOUS AIR POLLUTANTS: see Attached

Complete Attachment C before selecting one of the following emission estimate ranges.
 For an individual hazardous air pollutant:
 0 - 250 lbs/year: _____ 250-350 lbs/year: _____ 350-500 lbs/year: _____
 For a combination of hazardous air pollutants:
 0-1000 lbs/year: _____ 1000-1500 lbs/year: _____ 1500-2000 lbs/year: _____

11. By checking this box, I hereby certify that the information and data submitted in this notice fully describes this site and only this site and is true, accurate, and complete, based on reasonable inquiry and to the best of my knowledge. I recognize that falsification of the information and data submitted in this notice is a violation of R19-2-115, Utah Administrative Code.

By checking this box, I understand that I am responsible for determining whether I remain eligible for this exemption before making operational or process changes in the future and agree to notify the Division of Air Quality when this business is no longer eligible for this exemption.

Signature of Owner/Manager: Harry J. Gately Title: CHIEF ENGINEER
 Print Name: HARRY J. GATLEY Phone #: (801)272-2911 Date: 8-17-2010

Division Reviewer: Clayton Date: 8/25/10
 Small Source Applicable Yes No

