



Montana Department of Transportation

2701 Prospect Avenue  
PO Box 201001  
Helena MT 59620-1001

Jim Lynch, Director  
Brian Schweitzer, Governor

April 19, 2010



Alan Woodmansey  
Operations Engineer  
Federal Highway Administration  
585 Shepard Way  
Helena, MT 59601-9785

Subject: Recertify environmental documentation  
STPP 48-1(21)1  
Hardin - North  
Control Number: 4064000

Dear Alan,

Environmental Services has reviewed the above proposed project's impacts and has determined that this proposed project still qualifies as a Categorical Exclusion under the provisions of 23 CFR 771.129(c). The original categorical exclusion was signed September 9, 2002 and is attached. This proposed action also continues to qualify as a categorical exclusion under the provisions of ARM 18.2.261 (Sections 75-1-103 and 75-1-201, M.C.A.). This determination is based on the following information.

The scope-of-work as described in the Alignment and Grade Report (9/24/09) for the proposed project has been reviewed and has changed. The revised alignment more closely follows the existing alignment which has helped to reduce the impacts to adjacent properties and irrigation facilities. As a result of this change, we have updated the biological, cultural, hazardous waste etc. reports and found that in accordance with 23 CFR 771.117(a), this action will still neither individually or cumulatively, have any significant environmental impacts. A summary of the resource impacts changes resulting from the revised alignment is attached (Activity 116 Preliminary Environmental Document) along with a table summarizing the changes.

In accordance with the Federal Highway Administration's (FHWA) concurrence letter of April 15, 1999, this notification documents that this proposed action is still properly classified as a CE under the provisions of 23 CFR 771.117(d).

Sincerely,

Heidi Bruner, P.E.  
Engineering Section Supervisor  
Environmental Services Bureau

April 19, 2010  
Alan Woodmansey  
P.2

Hardin - North  
STPP 48-1(21)1  
CN 4064000

Attachments: Cat Ex signed 9/9/02, Alignment and Grade Report 9/24/09, and Activity 116 Preliminary Environmental Document

Copy (w/o encl.):      Stefan Streeter, P.E.                      Billings District Administrator  
                                 Paul R. Ferry, P.E.                      Highway Engineer  
                                 Tom S. Martin, P.E.                      Chief, Environmental Services Bureau  
                                 Heidi Bruner, P.E.                      Environmental Services Bureau  
                                 Suzy Price                                  Contract Plans Bureau Chief  
                                 Dave Jensen                                Fiscal Programming Section Supervisor  
                                 Alan Woodmansey, P.E.                      FHWA Operations Engineer  
                                 Tom Gocksch, P.E.                      Environmental Services  
                                 Environmental Services File

e-copy (w/o encl):      Montana Legislative Branch Environmental Quality Council (EQC)

HSB:tgg: S:\PROJECTS\BILLINGS\4000-4999\4064\4064ENCEDR01.doc

**Table 1. Summary of Potential Impacts and Proposed Mitigation**

<b>Resource</b>	<b>Change in Potential Impact Compared to Original Cat Ex</b>	<b>Change in Potential Mitigation Compared to FEIS/ROD</b>
Cultural Resources	<p>Site CC16 (Nine Mile School) – The building was re-evaluated in February 2010 and is no longer eligible for the NRHP due to extensive modifications made by the owner.</p> <p>Site CC11 &amp; Site CC12 (Beet Labor Houses) - Roadway shifted slightly closer to each of them. Impact changed from No Effect to No Adverse Effect</p> <p>Site 24BH2846/CC30 (Abandoned Railroad Grade) – Generally shifted slightly away from the resource. SHPO concurred that impacts are still covered by the original MOA.</p> <p>Site 24BH2445 (Big Horn Low Line Ditch) – Revised alignment eliminated 2 long channel changes of the ditch. SHPO concurred that the original determination of No Effect remains valid.</p>	No change in mitigation.
Section 4(f) Evaluations	<p>The Programmatic Section 4(f) evaluation for the Abandoned Railroad Grade signed by FHWA on September 6, 2002 has been re-evaluated and is still valid (included in Appendix E).</p> <p>The revised impacts to the Beet Labor Houses as described in the attached SHPO concurrence document do change the determination of effect from No Effect to No Adverse Effect. However, because the actual structures are eligible and not the property they sit on and the structures are not being impacted, the impacts still do not constitute a “use” under Section 4(f).</p>	No change in Mitigation

<b>Resource</b>	<b>Change in Potential Impact Compared to Original Cat Ex</b>	<b>Change in Potential Mitigation Compared to FEIS/ROD</b>
	The impacts to the Big Horn Low Line ditch have been reduced, and therefore the existing Programmatic Section 4(f) evaluation signed by FHWA September 6, 2002 remains valid (included in Appendix E).	
Wetlands	Impacts to wetlands will still occur. No specific quantity of wetland impact was specified, only that they would be impacted.	No change in mitigation.
Air Quality	No change in impact.	No change in mitigation.
Noise	No change in impact	No change in mitigation.
Fish & Wildlife, Habitats and Special Resources	No change in impact	No change in mitigation.
Farmlands	The impacts to farmlands reduced from 44.7 acres to 31.2 acres	No change in mitigation
Hazardous Materials	No change in impacts.	No change in mitigation.
Visual/Aesthetics	No change in impacts.	No change in mitigation.
Vegetation	No change in impacts.	No change in mitigation.
Social	No change in impacts.	No change in mitigation.
Economics	No change in impacts.	No change in mitigation.
Land Use	No change in impacts.	No change in mitigation.
Transportation	No change in impacts.	No change in mitigation.
Secondary and Cumulative Impacts	No change in impacts.	No change in mitigation.

HARDIN - NORTH  
STPP 48-1(21)1  
CONTROL No. 4064000

ACTIVITY 116  
PRELIMINARY ENVIRONMENTAL  
DOCUMENT

PREPARED FOR:

MONTANA DEPARTMENT OF TRANSPORTATION  
2701 PROSPECT AVENUE  
HELENA, MT 59620

PREPARED BY:

DOWL HKM  
P.O. Box 31318  
BILLINGS, MT 59107

ORIGINAL OCTOBER 12, 2009  
REVISED DECEMBER 17, 2009  
2<sup>ND</sup> REVISION MARCH 25, 2010

**INTRODUCTION**

The purpose of this Preliminary Environmental Document Report for the Hardin - North project is to serve as a summary of the environmental documentation completed by the previous consultant responsible for the design of the project. MK Centennial and their subconsultants completed the following environmental reports for the subject project:

<u>Report</u>	<u>Prepared By</u>	<u>Date</u>
Preliminary Environmental - Activity 104	MK Centennial	September 29, 1999
Preliminary Environmental Evaluation	Shapiro and Associates	March 9, 2000
Cultural Resources Survey Report	Shapiro and Associates	June 2000
Activity 116 Draft Environmental Doc.	Shapiro and Associates	June 15, 2000
Additional Environmental Documentation	Shapiro and Associates	July 11, 2001
Biological Assessment for Bald Eagle	Shapiro and Associates	July 11, 2001
Biological Assessment of Bald Eagle	Shapiro and Associates	December 18, 2001
Biological Resources Report	Shapiro and Associates	December 18, 2001

In addition a *Categorical Exclusion* and *Nationwide Section 4(f) Evaluation for Minor Impacts on Historic Sites* were signed for this project September 9, 2002.

The following additional reports were completed by DOWL HKM and Confluence as part of a re-design effort:

<u>Report</u>	<u>Prepared By</u>	<u>Date</u>
Findings and Delineation of Waters of the U.S.	Confluence	April 28, 2008
Addendums/Updated to Biological Resource Report	Confluence	April 28, 2008
Noise Analysis Update	DOWL HKM	September 21, 2009

**BACKGROUND**

This project is a rehabilitation of 10.58 miles of Montana State Route 47 (P-48) in Big Horn County beginning approximately 1.2 miles north of Hardin. The existing roadway consists of two lanes with little or no shoulders varying in width from 21 feet to 25 feet. The project design was initiated by another consultant design firm, MK Centennial (a.k.a. Washington Infrastructure Services) in metric units. The design was carried through the Plan-in-Hand phase of the project by MK Centennial. DOWL HKM was retained by the Department to complete the design of the project in English units. The purpose of this report is to document environmental impacts related to the revised design.

**CULTURAL RESOURCE MANAGEMENT**

The previous reports completed by Shapiro and Associates identified nineteen cultural resource sites within the project area which are summarized in the following table.

Resource ID	Type	Station	National Register Status
CC1 <sup>(1)</sup>	Isolated fragment of a metal container	568+00 Lt.	Not Eligible
CC6 <sup>(1)</sup>	Isolated possible stone core fragment	603+00 Lt.	Not Eligible
CC11 <sup>(1)</sup>	Small wood framed beet labor house	459+80 Rt.	Eligible <sup>(3)</sup>

Resource ID	Type	Station	National Register Status
CC12 <sup>(1)</sup>	Small wood framed beet labor house	488+67 Rt.	Eligible <sup>(3)</sup>
CC15 <sup>(1)</sup>	Small wood framed pump house	420+48 Lt.	Not Eligible
CC16 <sup>(1)</sup>	Nine Mile School	393+37 Lt.	Not Eligible <sup>(3)</sup>
CC24 <sup>(1)</sup>	Isolated metal lid	271+35 Rt.	Not Eligible
CC25 <sup>(1)</sup>	Concrete foundation of beet labor house	300+35 Rt.	Not Eligible
CC28 <sup>(1)</sup>	Body of Hudson four-door sedan	237+90 Lt.	Not Eligible
CC29 <sup>(1)</sup>	Isolated purple glass bottle top fragment	194+53 Lt.	Not Eligible
24BH2846/ CC30 <sup>(1)</sup>	Abandoned railroad grade	153+65 Rt. - 189+11 Rt. 284+03 Lt. - 364+93 Lt. 549+41 Rt. - 553+69 Lt.	Eligible
CC101 <sup>(2)</sup>	Wooden guardrail	364+65 Lt.	Not Eligible
CC102 <sup>(2)</sup>	Isolated fragments of clear glass soft drink bottle and milk glass	196+03 Rt.	Not Eligible
24BH2436 <sup>(1)</sup>	Timber stringer bridge	293+00 Ⓢ	Not Eligible
24BH2437 <sup>(1)</sup>	Timber stringer bridge	399+50 Ⓢ	Not Eligible
24BH2438 <sup>(1)</sup>	Timber stringer bridge	432+00 Ⓢ	Not Eligible
24BH2439 <sup>(1)</sup>	Timber stringer bridge	445+50 Ⓢ	Not Eligible
24BH2440 <sup>(1)</sup>	Timber stringer bridge	510+98 Lt.	Not Eligible
24BH2445 <sup>(1)</sup>	Big Horn Low Line Ditch	278+00 Rt. - 531+58 Lt.	Eligible <sup>(3)</sup>

<sup>(1)</sup> *Cultural Resources Survey Report*, Shapiro and Associates, June 2000

<sup>(2)</sup> *Additional Environmental Documentation*, Shapiro and Associates, July 11, 2001

<sup>(3)</sup> Sites were re-evaluated February 2010 and the SHPO concurrence is included in Appendix C.

A discussion of the impacts to the each of the sites eligible for the National Registers follows. Updated plan and profile sheets depicting the revised alignment are included in Appendix A. Plan sheets depicting the previous design are included in Appendix B.

**Site CC11 (Beet Labor House)** – The distances from the beet labor house from the edge of the roadway and the right-of-way are noted in the table below.

459+80 Rt. (130+46 Rt. Metric)	Distance from House to Edge of Pavement	Distance from House to Right-of-Way
Existing Condition	69 feet	29 feet
Previous Design	111 feet	30 feet (Proposed R/W)
Revised Design	47 feet	11 feet (Proposed R/W)

The revised design was shifted closer to the beet labor house to eliminate impacts to the Big Horn Low Line ditch (Station 455+45 to Station 496+55). On March 12, 2010 SHPO concurred with a change in the determination of effect from No Effect to No Adverse Effect for Site CC11.

**Site CC12 (Beet Labor House)** – The distances from the beet labor house from the edge of the roadway and the right-of-way are noted in the table below.

488+67 Rt. (139+25 Rt. Metric)	Distance from House to Edge of Pavement	Distance from House to Right-of-Way
Existing Condition	122 feet	84 feet
Previous Design	239 feet	84 feet (Proposed R/W)
Revised Design	108 feet	57 feet (Proposed R/W)

The revised design was shifted closer to the beet labor house to eliminate impacts to the Big Horn Low Line ditch (Station 455+45 to Station 496+55). On March 12, 2010 SHPO

concurring with a change in the determination of effect from No Effect to No Adverse Effect for Site CC12.

**Site 24BH2846/CC30 (Abandoned Railroad Grade)** – The impacts to the segments are as noted below.

Segment	Revised Design	Previous Design
153+65 Rt. - 189+11 Rt. (46+80 Rt. – 57+60 Rt. Metric)	The revised design is shifted slightly to the west (left) of the existing roadway creating a greater separation from the segment of the railroad grade which lies east of the existing roadway. The impacts to the railroad grade segment are similar to the previous design.	The previous design shifted the roadway west (left) of the existing roadway creating a greater separation from the railroad grade segment which lies east of the existing roadway.
284+03 Lt. – 364+93 Lt. (86+55 Lt. – 110+90 Lt. Metric)	The revised design follows the existing alignment until Station 338+40 where it shifts east of the existing roadway (right). The impacts to the railroad grade segment are similar to the previous design.	The previous design generally followed the existing roadway.
549+41 Rt. – 553+69 Lt. (167+40 Rt. – 168+80 Lt. Metric)	The revised design follows the existing alignment. The impacts to the railroad grade segment are similar to the previous design.	The previous design generally followed the existing roadway.

On March 12, 2010 SHPO concurred that the revised impacts are still covered by the June 13, 2002 Memorandum of Agreement (included in Appendix D).

**Site 24BH2445 (Big Horn Low Line Ditch)** – The impacts to the Big Horn Low Line Ditch are as follows.

At the Alignment and Grade Review Meeting held August 25, 2009 it was determined the alignment would be shifted to eliminate two long channel changes of the Big Horn Low Line Ditch of 2,371 feet and 3,260 feet. As a result of eliminating these channel changes from the design, disturbance of the Big Horn Low Line Ditch will be limited to a 740 foot channel change and four crossings. The comparison to the previous design is shown in the table below.

Segment	Revised Design	Previous Design
361+06 Lt. – 386+23 Lt. (110+00 – 117+67 Metric)	The revised design shifts the roadway to the east (right) to eliminate relocation of the ditch.	The previous design relocated approximately 2516 feet of the ditch.
430+60 Lt. – 446+80 Lt. (131+20 – 136+14 Metric)	The revised design follows the existing roadway and does not relocate the ditch.	The previous design relocated approximately 1621 feet of the ditch from the east (right) side of the roadway to the west (left) side.
455+45 Lt. – 496+55 Lt. (138+80 – 151+27 Metric)	The revised design shifts the roadway to the east (right) to eliminate relocation of the ditch.	The previous design relocated approximately 4091 feet of the ditch.
517+31 Lt. – 524+71 Lt. (155+60 – 160+00 Metric)	The revised design relocates approximately 740 feet of the ditch.	The previous design relocated approximately 1444 feet of the ditch.

On March 12, 2010 SHPO concurred that the original determination of No Effect remains valid for Site 24BH2445.

### **SECTION 4(f) EVALUATIONS**

The Programmatic Section 4(f) evaluation for the Abandoned Railroad Grade signed by FHWA on September 6, 2002 has been re-evaluated and is still valid (included in Appendix E).

The revised impacts to the Beet Labor Houses as described in the attached SHPO concurrence document do change the determination of effect from No Effect to No Adverse Effect. However, because the actual structures are eligible and not the property they sit on, and the structures are not being impacted, the impacts still do not constitute a “use” under Section 4(f).

The impacts to the Big Horn Low Line ditch have been reduced, and therefore the existing Programmatic Section 4(f) evaluation signed by FHWA September 6, 2002 remains valid (included in Appendix E).

### **WETLANDS EVALUATION & COORDINATION**

The wetland field evaluations were updated by Confluence Consulting, Inc. The assessments can be found in the *Report Of Findings And Delineation Of The Waters Of The U. S. Including Special Aquatic Sites And Jurisdictional Wetlands, SR47 - Hardin North, Big Horn County, Montana* updated April 29, 2008.

The field evaluations found fourteen wetlands within the project limits. The majority of the wetlands are sustained by current irrigation practices. Effort will be made to minimize the impacts to wetlands if possible by shifting the roadway alignment and steepening side slopes. However, total avoidance of wetland impacts is unavoidable due to the proximity of the wetlands to the roadway.

The locations of the wetlands are as follows:

Wetland	Station		Area (acres)	Impacted (Yes or No)	Remarks
	From	To			
Wetland W1	82+70	98+52	0.87	Yes	Whitman Coulee
Wetland W2	208+14	208+31	0.03	Yes	
Wetland W3	228+05	252+07	3.50	Yes	
Wetland W4	282+58	299+94	0.72	Yes	
Wetland W5	331+84	333+03	0.15	Yes	
Wetland W6	339+11	364+82	2.70	Yes	Lone Tree Coulee
Wetland W7	349+25	361+83	2.32	Yes	
Wetland W8	399+27	399+62	0.19	Yes	
Wetland W9	417+09	420+19	0.12	Yes	
Wetland W10	430+03	442+20	> 0.28	Yes	
Wetland W11	442+46	533+88	> 2.12	Yes	
Wetland W12	467+96	513+62	> 3.20	Yes	
Wetland W13	530+42	546+56	0.69	Yes	
Wetland W14	604+95	605+88	0.19	Yes	

## **AIR QUALITY ASSESSMENT**

As documented by Shapiro and Associates<sup>1</sup>, is located in an “unclassifiable”/attainment area for air quality. The project will comply with Section 176(c) of the Clean Air Act (42 U.S.C. 7521(a)).

## **HAZARDOUS MATERIALS/SUBSTANCES (ISA)**

Shapiro and Associates completed the ISA for this project in March of 2000. At that time one above ground storage tank was found at milepost 9.0. A review of Montana Department of Environmental Quality databases and GIS inventory did not identify any additional underground storage tanks or leaking storage tanks.

The abandoned railroad grade parallels the highway centerline from approximately from Station 189+11 to Station 284+03 and from Station 364+93 to Station 406+00. Previous assessments noted old railroad ties and other hazardous materials could potentially remain from the railroad.

In the first segment of parallel railroad grade from Station 189+11 to Station 284+03, the proposed roadway alignment closely follows the existing highway alignment. The centerline of the abandoned railroad grade is approximately 45 feet from the proposed roadway centerline. In some areas the abandoned railroad grade has been farmed by adjacent landowners. There were nine borings taking in this area, none of which encountered any hazardous materials. There will be some excavation into the abandoned railroad grade with the proposed roadway ditch section, however most of the excavation will be shallow, less than two feet.

In the second segment of parallel railroad grade from Station 364+93 to Station 406+00, the proposed roadway alignment has been shifted from the existing roadway alignment such that it is very close to the abandoned railroad grade centerline from the start of the segment to approximately Station 389+00. The proposed roadway will be adding fill over the abandoned railroad grade to Station 389+00. From Station 389+00 to the end of the segment, the proposed design includes shallow cuts, less than 1.5 feet, and slight fills over the abandoned railroad grade. In some areas the abandoned railroad grade has been farmed by adjacent landowners.

A soil sample in the vicinity of Station 545+00 was analyzed during the previous design efforts for extractable petroleum hydrocarbon (EPH). The tests yielded an EPH level of 81 mg/kg. This level is below the current DEQ threshold level of 2,500 mg/kg.

## **PRELIMINARY NOISE ANALYSIS**

As noted by Shapiro and Associates, the project is located in a rural agricultural area with scattered homes<sup>2</sup>. The project generally follows the existing alignment with minor shifts to improve alignment deficiencies. A determination was made that additional noise modeling was not required for this project by the Department and Shapiro and Associates in March 2000. A

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<sup>1</sup> Activity 116 Draft Environmental Document and Resource Reports, Hardin – North, Shapiro and Associates, June 15, 2000, p. 11

<sup>2</sup> Activity 116 Draft Environmental Document and Resource Reports, Hardin – North, Shapiro and Associates, June 15, 2000, p. 13

review of the proximity of the existing highway and proposed roadway to homes in the corridor has been completed by DOWL HKM<sup>3</sup>. DOWL HKM concurs with the earlier determination that additional noise modeling is not required for this project. The project has low traffic volumes and any increases in noise are anticipated to be very minor.

### **FISH & WILDLIFE, HABITATS, & SPECIAL RESOURCE ASSESSMENT**

Shapiro and Associates completed the field reviews, surveys, contacts, and coordination efforts as required for this project. The detailed results and documentation regarding this effort can be found in the above mentioned reports. The reports found no occurrences of rare and sensitive plant species. An active bald eagle nest was found within 0.25 miles of the project area and recommendations were made to restrict construction activities near Ninemile Point (Township 1 North, Range 33 East, Section 15) as noted below:

1. March 1 to May 30, no construction activities within 0.5 miles of the nest site,
2. May 30 to August 1, no construction activities within 0.25 miles of the nest site.

Since the completion of the report the bald eagle has been delisted and conservation measures will now be based on the provisions of the Bald and Golden Eagle Protection Act and the National Bald Eagle Management Guidelines (USFWS May 2007).

Whitman coulee and Lone Tree coulee are listed on the Fish, Wildlife and Parks MFISH database. Ken Frazer, FWP Fisheries Biologist, was contacted to determine what construction requirements would be needed if any. Whitman Coulee has native minnow species. New crossings will need to be design to maintain the native minnow population.

### **HISTORIC ROADS & BRIDGES**

As noted by Shapiro and Associates<sup>4</sup> there are no historic roads or bridges within the project limits.

### **FARMLANDS**

The acquisition of farmlands was evaluated for the revised design and the previous design. The results of which are presented below:

Farmland Acquisition	Acres
Previous Design	44.7
Revised Design	31.2

The major crops on this project are sugar beets, small grains, and alfalfa. Land use has remained the same from the time the evaluation of the previous design was completed to the time the revised design was evaluated. The Farmland Conversion Rating Form has not been updated or revised, due to the reduction in farmland impacts of the revised design.

<sup>3</sup> Activity 179 Noise Analysis Investigation Updated September 2009, DOWL HKM, September 21, 2009

<sup>4</sup> Activity 116 Draft Environmental Document and Resource Reports, Hardin – North, Shapiro and Associates, June 15, 2000, p. 15

**REQUEST ENVIRONMENTAL INFORMATION**

Shapiro and Associates contacted the following agencies regarding this project<sup>5</sup>:

Montana Department of Environmental Quality  
Montana Department of Fish, Wildlife, and Parks  
Montana Water Resource Division  
Montana Historical Society, State Historic Preservation Office  
Montana Natural Heritage Program  
United States Fish and Wildlife Service  
USDA Montana Big Horn Conservation District  
Crow Tribal Council

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<sup>5</sup> Activity 116 Draft Environmental Document and Resource Reports, Hardin – North, Shapiro and Associates, June 15, 2000, Appendix G

In addition, Confluence Consulting, Inc. made the following agency contacts in June of 2007:

Scott Bocknes  
Big Horn County Weed Supervisor  
P.O. Box 25  
Hardin, MT 59034

Ken Dvorak  
USACE  
Billings Regulatory Office  
1629 Avenue D  
Billings, MT 59102

Tom Ellerhoff  
Montana DEQ  
P.O. Box 200901  
Helena, MT 59620

Ken Frazer  
Montana Fish, Wildlife, and Parks  
FWP Region 5 Office  
Billings, MT 59105

Lou Hanebury  
US Fish & Wildlife  
Ecological Services Field Office  
2900 4<sup>th</sup> Ave. North, Rm 301  
Billings, MT 59101

Jody Hastings  
Big Horn County Conservation District  
Hardin Field Office  
724 3<sup>rd</sup> St. West

Ray Mule  
Montana Fish, Wildlife, and Parks  
FWP Region 5 Office  
Billings, MT 59105

Bonnie Steg  
MDT Environmental Services  
2701 Prospect Ave.  
P.O. Box 201001  
Helena, MT 59620-001

Matthew McClellan  
Big Horn County Extension Office  
P.O. Box 908  
Hardin, MT 59034

## **PERMITS REQUIRED**

The following permits will be required for this project.

- SPA 124 Permit
- Section 404 Permit
- Floodplain Permit
- Section 402/Montana Pollutant Discharge Elimination System (MPDES) Permit

## **ENVIRONMENTAL COMPLIANCE**

Based on the evaluation of the design impacts associated with the revised design and the design impacts associated with the previous design, it is DOWL HKM's recommendation that the project qualifies as a Categorical Exclusion.