
University of Alaska Fairbanks

New OE Request: Format 3A

**OCCUPATIONAL ENDORSEMENT IN RURAL WASTE MANAGEMENT
AND SPILL RESPONSE**

10 credits minimum

Submitted by
UAF Bristol Bay Campus
College of Rural and Community Development
September 2014

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I. COVER MEMORANDUM

A. NAMES OF PERSONS PREPARING REQUEST

This request was prepared by Dr. Todd Radenbaugh, Associate Professor of Environmental Science at UAF BBC, Dr. Brian Rasley, CRCD Science Department Chair, Dr. Debi McLean, Director of University of Alaska Fairbanks Bristol Bay Campus (UAF BBC), Dr. Lynn Zender, Executive Director of Zender Environmental Health and Research Group, and the partners listed in Appendix B

Key contact information:

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B. BRIEF STATEMENT OF PROPOSED ENDORSEMENT

Overview:

Across rural Alaska, communities face the daunting challenge of handling an ever increasing amount of solid waste and hazardous material while building recycling efforts. The remote and often isolated character of Alaskan communities results in an exceptional set of circumstances to waste management issues. The proposed Occupational Endorsement (OE) for Rural Waste Management and Spill Response is a 10-credit program designed to provide students a foundation of skills necessary to address waste management in rural Alaska. There is currently no accredited program to provide the necessary education in the field and this OE aims to fill this void. Graduates will be positioned on a track towards further educational attainment in other science or technical programs such as the Certificate in Environmental Studies, or other certificate or Associates degrees. Additionally, the skills obtained in the OE may serve as a foundation for employment in other technical positions in rural communities giving employers an opportunity to hire locally and support local economic development.

Industry Objectives:

Rural communities manage solid and hazardous waste according to guidelines and regulations established by Alaska Department of Environmental Conservation (DEC) and US Environmental Protection Agency (EPA). Associated with these requirements is a demand for trained solid waste managers and hazardous waste handlers. The OE in Rural Waste Management and Spill Response will provide a structured educational sequence that was designed with industry input.

Summary of Student Learning Outcomes Assessment and Implementation Plan:

The Student Learning Outcomes Assessment Plan has been designed to meet the objectives of the OE in Rural Waste Management. The Environmental Studies Program Coordinator will be

responsible for implementation of the plan. See Section II. C for a detailed student outcomes assessment and implementation plan.

Summary of Intended Outcomes

- Students will acquire the necessary skills for entry-level employment in rural waste management.
- Students will obtain additional endorsements or certifications associated with required or elective course content (e.g. CPR/First aid, OSHA HAZWOPER, OSHA 10 hour, etc.)
- Students will develop job readiness skills
- Please see Course learning Matrix (section C.), and Appendix A for more details

C. PROVISION FOR REVIEW SIGNATURES OF PREPARATION:

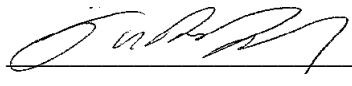
C. PROVISION FOR REVIEW SIGNATURES OF PREPARATION:



CRCD Science Department Chairman

12/15/14

Date



ENVI Program Head

13 - Dec - 2014

Date

Signature attached at end of this document

Director, UAF Bristol Bay Campus

Date

Dean, College of Rural and Community Development

Date

College of Rural and Community Development
Academic Council

Date

SIGNATURES FOR APPROVAL:

Curricular Affairs Committee Chair

Date

President, UAF Faculty Senate

Date

Chancellor, UAF

Date

II. IDENTIFICATION OF THE Occupation Endorsement in Rural Waste Management

A. DESCRIPTION OF THE OE

1. Occupational Endorsement Title: Rural Waste Management

2. Admission Requirements and Prerequisites:

Students accepted into the Rural Waste Management and Spill Response program must:

- a. Document either a High School Diploma or a GED

Recommended:

- Due to the science focus of this Occupational Endorsement, it is recommended that students seeking admission to this program have completed a high school, lab-based science course as well as math through the algebra level.
- Experience with computer applications skills, such as word processing and spreadsheets, is also recommended.

3. Course Descriptions

ABUS F183 1 credit Job Readiness Skills

Practical information necessary to help students choose meaningful employment as well as build their own employment portfolio. Materials used will allow students to learn more about themselves, engage in personal assessment and learn how this information relates to different careers. Students will complete target resumes, cover letters, follow-up letters, applications, job search strategies, mock job interviews and a professional portfolio. Recommended: Job readiness. This class is designed for students embarking into the job market. (1-3+0)

ENVI F110 1 credit Introduction to Water Quality I: Measurement

Introduces students to standard water quality methods used and applies them to rural Alaska. Students will become familiar with EPA water quality standards and programs that help preserve water quality in rural communities. Key topics covered include: stream ecology, wastewater management, storm water runoff and data analysis. (0.5+1.5)

ENVI F115 1 credit Rural Solid and Hazardous Waste Management

An overview of solid and hazardous waste management focusing on rural Alaskan communities. Topics covered include: workplace safety, worker roles, recycling facility operation, solid waste composting, hazardous material and waste inventorying, toxicology principles, risk assessment, hazardous site community open dumpsite assessment, and the implications of the National Environmental Policy Act. (1+0)

ENVI F116 1 credit Rural Alaska Landfill Operator (RALO)

Covers best practices in managing rural landfills in compliance with State of Alaska regulations and guidelines with an emphasis on operator and public safety. This course is designed to train operators for rural Alaska Class II and Class III landfills and a passing grade results in formal recognition by the Solid Waste Association of North America-Alaska (SWANA-Alaska). (1+0)

ENVI F117 1 credit Community Spill Response

Overview of responses to petroleum and other spills that threaten community health with emphasis placed upon the issues, techniques, and the basic elements of spill response in Alaskan communities. Topics include: storage tanks above and underground, spill contamination site treatment, state and federal governmental regulations related to spills, spill reporting/incident action plans, and practical procedures in spill response. (1+0)

FIRE F110 3 credit Introduction to Hazardous Waste Operations and Emergency Response
Review of federal and state hazardous materials laws and regulations. Career opportunities related to the field of hazardous materials including transportation, emergency response, site clean up and Incident Command System (ICS). (3+0)

4. Requirements for the Occupational Endorsement in Solid Waste Management

a) Complete the following requirements (7 credits)

ABUS	F183	Job Readiness Skills	1
ENVI	F110	Introduction to Water Quality I: Measurement	1
ENVI	F115P	Solid and Hazardous Waste Management	1
ENVI	F116P	Rural Alaska Landfill Operator (RALO)	1
ENVI	F117P	Community Spill Response	1
FIRE	F110	Introduction to Hazardous Waste Operations and Emergency Response	3
<i>Total</i>			8

b) Complete two credits from the following electives (2 credits)

CIOS	F135	Microcomputer Spreadsheets	1-3
CTT	F130	Introduction to Facilities Maintenance	1
ENVI	F130	Introduction to the National Environmental Policy Act	1
ENVI	F160	Internship in Environmental Studies	1-2
ENVI	F260	Field Methods for Environmental Technicians	2
HLTH	F122	First Aid and CPR	1
RD	F250	Grant Writing for Community Development	1-3
TM	F130	Introduction to Utility Management	2

Advisor approved electives 1-2

Total Credits (required plus elective) 10

Sample Courses of Study for the Occupational Endorsement in in Solid Waste Management

Condensed One Semester Plan

Spring Semester

ABUS F183 – Job Readiness Skills	1 credit
ENVI F110 – Introduction to Water Quality I: Measurement	1 credit
ENVI F115 – Solid and Hazardous Waste Management	1 credit
ENVI F116 – Rural Landfill Operator (RALO)	1 credit
ENVI F117 – Community Spill Response	1 credit
FIRE F110 – Introduction to Hazardous Waste Operations and Emergency Response	3 credit
Elective classes	2 credit

1 year plan

Spring Semester

ABUS F183 – Job Readiness Skills	1 credit
ENVI F110 – Introduction to Water Quality I: Measurement	1 credit
ENVI F115 – Solid and Hazardous Waste Management	1 credit
Elective classes	2 credits

Fall Semester

FIRE F110 – Introduction to Hazardous Waste Operations and Emergency Response	3 credit
ENVI F116 – Rural Alaska Landfill Operator (RALO)	1 credit
ENVI F117 – Community Spill Response	1 credit

**3-Year Cycle of Course Offerings for in OE in Solid Waste Management
Condensed Plan**

COURSE	Fall 2015	Spring 2016	Summer 2016	Fall 2017	Spring 2017	Summer 2017	Fall 2018	Spring 2018	Summer 2018
ABUS F183		x			x			x	
ENVI F110		x			x			x	
ENVI F115		x			x			x	
ENVI F116		x			x			x	
ENVI F117		x			x			x	
FIRE F110		x			x			x	
electives		x			x			x	

Semester Plan

COURSE	Fall 2015	Spring 2016	Summer 2016	Fall 2017	Spring 2017	Summer 2017	Fall 2018	Spring 2018	Summer 2018
ABUS F183		x			x			x	
ENVI F110		x			x			x	
ENVI F115		x			x			x	
ENVI F116	x			x			x		
ENVI F117	x			x			x		
FIRE F110	x			x			x		
electives	x	x	x	x	x	x	x	x	x

c) Proposed Catalog Description

The OE in Rural Waste Management and Spill Response provides education and training in how to handle and manage management municipal waste. Emphasis is placed upon providing students with the skills and experience necessary to implement solutions to challenging solid waste stream issues facing rural waste managers. The program introduces students to best practices in waste management that are in compliance with state and federal governmental regulations. Exceptional focus is placed on workplace safety and students are assessed on proficiency in operational safety and safety planning. Upon completion of the OE, students will be prepared to help protect rural communities from many of the environmental risks associated with waste disposal by safely managing municipal solid and hazardous waste streams.

B. Occupation Endorsement Goals

1. Objectives and Means of their Evaluation:

The goal of this OE is to provide the preparation needed for graduates to enter directly into the workforce or into a science and engineering-related certificate, associate, or baccalaureate degree.

a) Objectives

- Students will develop the academic skills and gain the essential knowledge in waste management necessary to understand and work in rural communities as waste managers.
- Demonstrated proficiency in standard practices and regulatory requirements in waste management with a strong emphasis on safe material handling practices and process planning.
- Demonstrated proficiency in job readiness.
- Advancement into a science or engineering-related Certificate, Associate or Baccalaureate program or other undergraduate course work in science or engineering.

b) Evaluation

- Academic Performance – Accumulated GPA in required courses.
- Students will consider safety, best practices, and governmental regulations in preparing paperwork, planning waste stream management, and exhibiting applied skills in waste management and spill response.
- Preparation of a professional resume and participation in a mock interview.
- Number of students gaining employment in waste management positions or continuing into science and engineering-related degree programs.

2. Relationship of Endorsement Objectives to Industry Needs

Across rural Alaska, communities must safely manage solid and hazardous waste according to guidelines and regulations established by Alaska Department of Environmental Conservation (DEC) and US Environmental Protection Agency (EPA). Due to logistics, economics, and geohydrological circumstances, rural landfills in Alaska need to follow specific federal and state regulations. Compliance with these regulations mandates a need for trained individuals with knowledge of the rules and best practices for managing community solid and hazardous waste collection and disposal. Spill response is regulated by DEC, in accordance with numerous federal statutes including those related to worker safety and environmental protection. Rural communities are isolated and even in the case of large and complex spills, local technicians are usually the first responders, necessitating spill response training. Further, certifications to safely and legally handle solid waste and hazardous materials are needed to best safeguard health and the environment.

The Rural Waste Management and Spill Response Technician OE meets rural community environmental health needs by providing a structured educational curriculum in rural waste management and spill response. High rural unemployment rates will frequently mean the individuals interested in a waste worker career may be unemployed or lack experience in regularly scheduled work hours. Thus, the OE includes a workforce development focus on the skills needed for qualified rural workers. The sequence will provide the development of a skillset that prepares graduates for technician-level employment in waste management or a broad range of other rural technical careers. UAF Bristol Bay Campus and the Environmental Studies faculty have sought the input and support from community and industry partners including Zender Environmental, Alaska Native Tribal Health Consortium, Bristol Bay Area Health Corporation, Bristol Bay Native Association, Kawerak, Northwest Arctic Borough, and Southwest Alaska

Municipal Conference in developing this OE proposal. The OE course of study was developed with the assistance of the partners at the Bristol Bay Campus.

The educational sequence of the Occupational Endorsement can be completed in an intensive format over a single semester, or it can be completed over the course of a year. The educational sequence has been developed in partnership with Zender Environmental Health and Research Group, an established organization dedicated to assisting rural communities in Alaska with waste stream management. Zender designed the Rural Alaska Community Environmental Job Training Program (RACEJT) in response to their community clients' needs for job training and workforce development throughout the state. RACEJT was developed using solicited industry employer input and follows the OE in Rural Waste Management and Spill Response Technician intensive format. It has been recognized as a successful program currently meeting industry and community needs for qualified waste management and spill response workers (see <http://zendergroup.org/racejt.html> for more information). With the cooperation of RACEJT Program staff the OE will offer educational opportunities to rural waste workers.

Although the OE is designed to be available in an intensive training program based on the EPA approved RACEJT curriculum, it may further meet industry and student needs if it is attainable over the course of one academic year. Thus, a yearlong course of study is proposed with courses that are typically offered in the Spring and Fall semesters (including many distance delivery courses). This course of study would make the OE more accessible for students wishing to complete the occupational endorsement while holding a full time job and may further meet community needs by allowing those workers to receive training while keeping up with the demands of their waste management positions. Providing a longer course of study will give employers statewide an opportunity to hire locally but also should support local economic development.

3. Occupational/Other Competencies to Be Achieved:

The OE in Rural Waste Management and Spill Response prepares students for entry-level employment in waste management. Upon completion of the OE, students will be prepared to help protect their communities from the environmental risks associated with waste disposal by safely managing community municipal/village solid and hazardous waste streams. The program will train students not only in the details of solid waste management but may also include other industry endorsements like OSHA 10 hour, HAZWOPER, and First Aid and CPR certification. Students will be advised to complete elective courses related to job preparation and employability skills to round out a curriculum that produces well rounded and skilled workers for rural communities. The skills obtained in completing the Rural Waste Management and Spill Response OE should serve students as a foundation for learning more technical competences needed to manage rural waste streams. Training local students will not only give regional employers an opportunity to hire locally but also support local economic development. In addition, graduates will be positioned on a track towards other tribal management, science and engineering programs such as the Environmental Studies Certificate as well as associate and baccalaureate degrees.

4. Relationship of Courses to the Endorsement Objectives:

The OE courses directly serve program objectives by:

- a) Providing opportunities to increase applied student knowledge, skills, and techniques used by waste managers in rural Alaska.

- b) Providing culturally appropriate opportunities for development or improvement of job preparedness for rural workers.
- c) Making extensive use of federal, statewide and local resources.
- d) Providing coursework that is relevant to related technical careers in rural communities.

C. DESCRIPTION OF STUDENT LEARNING OUTCOMES ASSESSMENT PLAN

The Rural Waste Management and Spill Response Technician Occupational Endorsement Student Outcomes Assessment Plan is shown in Appendix A along with an Individual Learning Outcomes Assessment Rubric. These documents detail how the outcomes and expectations of the program will be assessed. Responsibility for implementation and documentation of the Rural Waste Management and Spill Response Technician OE will reside with the parent program, Environmental Studies, at the Bristol Bay Campus. The coordinator of the Environmental Studies program, currently Dr. Todd Radenbaugh, will assume responsibility for implementing the OE and maintaining related documentation. Records associated with the program will be maintained at the UAF Bristol Bay Campus as well in UAF BANNER. Records that will be maintained will include student grades in required courses, evidence that students obtained all necessary certifications and endorsements associated with courses, Individual Student Learning Outcomes Assessment Rubrics, and post-graduation surveys. Implementation of the student learning outcome assessment will be conducted as listed below:

1. Course instructors will evaluate student performance in accordance with the course syllabus and provide relevant feedback and support.
2. Course instructors with associated endorsements will document student attainment and provide it to Environmental Studies program coordinator.
3. Individual Student Learning Outcomes Assessment Rubric will be completed by the Environmental Studies Program Coordinator.
4. Surveys will be conducted by the Environmental Studies Program Coordinator.

III. PERSONNEL DIRECTLY INVOLVED WITH THE PROGRAM

A. FACULTY INVOLVED

1. Faculty

- a) Dr. Todd Radenbaugh, Associate Professor, Environmental Studies, UAF Bristol Bay Campus

2. Adjunct Faculty

- a) Dr. Lynn Zender, Executive Director, Zender Environmental
- b) Adjunct faculty will be hired on demand using contacts with parting organizations.

B. ADMINISTRATIVE, COORDINATING, AND CLASSIFIED PERSONNEL

1. Dr. Debi McLean, Director, UAF BBC, Dillingham
2. Environmental Studies Technician, UAF BBC, Dillingham
3. Jim Jones, Systems Manager, UAF BBC, Dillingham

IV. ENROLLMENT INFORMATION

A. PROJECTED ENROLLMENT

The Rural Waste Management and Spill Response Technician OE is designed to attract a diverse student population whose interests are broad-based and interdisciplinary. In 2013, UAF Bristol Bay Campus had a credited student enrollment of 1364; roughly 70% of these students (792) were Alaska Native. Based on 2013 enrollment numbers the majority of students will be Alaska Native and it is unlikely that students will be from out of state. This OE directly addresses the University's stated commitment to serve the Alaska Native population and emphasizes recruitment of Alaska Native and rural students in an underserved academic area.

The commitment by Zender Environmental to enroll all of their RACEJT students in the OE establishes a beginning enrollment of 18 students. In addition, the UAF BBC is currently collaborating with several entities to provide multiple attainment pathways. Recent conversations and meetings have resulted in partnerships (see Appendix B) that show strong support for this OE. Based on the increasing demand for qualified entry-level employees in the waste management fields, as well as partner interest and support, enrollment for this OE is expected to grow. For example, while RACEJT is open only to unemployed or underemployed individuals, a statewide RACEJT teleconference of rural community environmental directors (March 28, 2013) identified that a program open individuals already employed as local environmental workers is needed. In fact, meeting participants stated a desire to take the curriculum themselves and confirmed that many of their peers would also be interested.

B. HOW DETERMINED/WHO SURVEYED/HOW SURVEYED

The student enrollment projections for this OE reflect both community needs (conference surveys and discussion with partners) and RACEJT recruitment efforts. UAF BBC held numerous sessions and panel discussions during the Fall and Spring semesters in 2012-13. Surveys were handed out at two conferences that typically attract rural solid waste management workers (Alaska Tribal Conference on Environmental Management in 2012 and Alaska Forum on the Environment in 2012 and 2013). The majority of potential students agreed that there is not only a need for more qualified entry-level employees but for training and educational programs. Detailed information regarding the surveys used in the development of the occupational endorsement is provided in Section V (Need for Occupational Endorsement).

C. MAXIMUM ENROLLMENTS

Staff members from environmental programs around the state have indicated a preference for a formal and accredited waste management and spill response training program. Students will be recruited from across the state and students successfully completing RACEJT will be eligible to earn the OE. Given the current number instructors we calculate a potential for enrollment as high as 40 per year. This is based on the experience of Zender Environmental, an organization that teaches classes on rural waste related topics. Given that rural waste stream issues are diverse in Alaska, teaching waste management courses require a substantial time for discussion and individual problem solving. This means that the maximum enrollment for a single class is about 18 students. The maximum enrollment for this program will be dependent upon the availability of many components including: faculty, instructional space, travel resources to teach the required face-to-face classes in rural communities, or travel resources to fly students to urban facilities.

V. NEED FOR OCCUPATIONAL ENDORSEMENT

A. EMPLOYMENT MARKET NEEDS

1. Procedures

Surveys provide most of the information regarding employment market needs. The information regarding employability needs leading to the development of this OE comes from surveys conducted since 2011. In 2012, UAF BBC surveyed attendees of Alaska Tribal Conference for Environmental Management (ATCEM) assessing the need in rural areas as well as throughout the state for more graduates of environmental educational and vocational training programs. In addition, UAF BBC held numerous meetings and conversations in the fall of 2012-13 with industry leaders regarding training and educational programs currently available in Alaska. The overwhelming consensus was that there is not only a need for more qualified entry-level employees but of training and educational programs as well.

Another survey effort was conducted prior to UAF BBC efforts. In 2011, Zender Environmental assessed the need for environmental job training in general, and the waste management and spill response fields more specifically. The assessment was conducted through face-to-face conversations at Alaska Forum on the Environment (AFE) and with potential environmental employers throughout the state. A one page survey was distributed to tribal organizations that queried the training needs within their communities and identified potential job opportunities. Respondents were from all rural regions with the exception of the North Slope. Five regional tribal consortiums, geographically representative of the state's rural regions, were contacted and 11 individual communities also provided input. Two teleconferences were held as well to invite rural community representatives to discuss how a job training program would meet their needs and ensure that local residents were hired. The conversations and survey results indicated a high demand for skilled environmental professionals with certifications in HAZWOPER, solid and hazardous waste management, as well as training in contaminated site/facility spills.

In addition to community entities, environmental and engineering contractors in Anchorage were asked about rural job needs. Firms such as Satori Group, Braunstein Geological & Environmental Services (BGES), CH2MHill, Golder & Associates, and CE2 were consulted about the training curriculum. These entities were supportive of the objective to train rural residents and preferred local hire for their rural projects. Job opportunities in landfill closures, new landfill construction, contaminant sampling, contaminated soil remediation, and Hazardous Waste Assessments were noted.

Based on their initial assessment, Zender Environmental created a curriculum similar to the proposed OE and piloted it for two years. In 2013, they once again contacted both urban employers who work in rural areas and rural employers to ensure that their curriculum was comprehensive and encompassed their needs. Over the months of February and March 2013, an assessment of a total of sixteen urban employers that work in rural areas was conducted. Eight environmental engineering consulting firms filled out a labor market assessment. Zender also contacted the 5 regional native consortiums surveyed in 2011 to reassess training needs. Not all the urban employers contacted had hiring needs that fit with this OE, however each of the employers provided valuable insight into the general attributes, life skills, and job skills needed for local

residents to be hired on their projects. These insights lead to the addition of job readiness to the OE curriculum.

In addition, Zender e-mailed every US EPA Tribal Response Program and Indian General Assistance Program in the State of Alaska to assess their training needs. A workforce assessment questionnaire was sent out and a teleconference was held. Results indicated a need for a trained rural labor force, and specifically for the skills/certifications of HAZWOPER, worker safety, spill response, solid waste management, hazardous materials management, and soil and water sampling.

Survey information obtained in developing the OE supports the State of Alaska's statistics. A Department of Labor 2010 Green Jobs survey showed that approximately 14% of employers of Environmental Health Technicians and Hazardous Materials Removal Workers could not find or retain workers because of the lack of required green job skills, with 35% of technician jobs and 86% of hazardous materials removal jobs requiring special skills and certificates. Figures provided by the Department of Labor website (<http://almis.labor.state.ak.us>) project, by 2018, a 12.3% increase in jobs in Professional, Scientific, and Technical Services, and an 11% increase in Environmental jobs.

2. Job Opportunities

A good indicator of potential employment opportunities for graduates of the OE program is the job placement of RACEJT and SWANA graduates. In 2012-2013, graduates from RACEJT were closely monitored for job placement. Eighty-nine percent of graduates were placed in related jobs, entered advanced education/ technical trade school, or received an increase in wage or hours (in the case of graduates who had a job when entering the program but were underemployed). In the past two years, RACEJT graduates have been placed in the following positions: Landfill Operator, Waste Collection Technician, Resource Recovery Technician, Environmental Program Coordinator/Assistant, Contaminated Building Demolition Crew, Tank Maintenance Supervisor, Community Emergency Response Team, Contaminated Site Cleanup, and Brownfield Program Coordinator.

3. How Have Positions Been Filled to Date?

Based on the employment research described above, positions have been filled with undertrained individuals who are generally untrained to safely perform all of their required landfill duties. These workers may also have a lack of job readiness that results in employee turnover. In other instances, positions have been unfilled because communities are wary of hiring undertrained employees for a position with serious safety, environmental, and health risks.

VI. OTHER

A. Community and Industry Partners

This proposal is the result of an ongoing initiative by UA campuses, Alaskan residents, local and regional nonprofits, and communities concerned about the lack of quality educational opportunities available to Alaska. Letters of support have been received from Zender Environmental, Alaska Native Tribal Health Consortium, Bristol Bay Area Health Corporation, Bristol Bay Native Association, Kawerak, Northwest Arctic Borough, and Southwest Alaska Municipal Conference (see appendix A for letters of support). The UAF BBC and its partners will continue to plan, guide, monitor, and assess the OE.

B. FACULTY

Dr. Todd Radenbaugh (Associate Professor of Environmental Science, UAF BBC) is currently responsible for the coordination the UAF CRCD Environmental Studies program. The majority of the instructors to teach the required classes will either come from within current CRCD faculty or be adjunct instructors hired by the program. Adjunct instructors will mostly be provided by the current partners listed in the Appendices.

C. COURSE LEARNING MATRIX

Occupation Endorsement in Solid Waste Management Course Learning Matrix

Demonstrate knowledge of societal problems and solutions related to its waste disposal and hazardous waste		FIRE F110	ENVI F110	ENVI F115P	ENVI F116P	ENVI F117P	ABUS F183	Elective
1	Acquire knowledge of environmental issues in rural Alaska		X	X	X	X		X
2	Recognize basic science concepts related to solid waste	X	X	X	X			X
3	Acquire knowledge of waste handling techniques	X		X	X			X
4	Acquire basic knowledge of water and soil sampling.		X			X		X
5	Learn what are hazardous materials and how to safely handle them	X				X		X
6	Discuss economic aspects of maintaining quality standards	X	X	X				X
Developing Job Skills		FIRE F110	ENVI F110	ENVI F115	ENVI F116P	ENVI F117P	ABUS F183	Elective
1	How to apply for and maintain a professional job						X	X
2	Be able to comply with applicable laws and regulations	X	X	X	X	X		X
Maintaining Healthy and Safety Work Environment		FIRE F110	ENVI F110	ENVI F115	ENVI F116P	ENVI F117P	ABUS F183	Elective
1	Understand health and safety concerns	X	X	X	X	X		X
2	Describe possible solutions to waste issues	X	X	X	X	X		X
Apply effective interpersonal and communication skills		FIRE F110	ENVI F110	ENVI F115	ENVI F116P	ENVI F117P	ABUS F183	Elective
1	Practice audience appropriate communication.						X	X
2	Be able to write reports, correspondences, etc.					X	X	X
3	Demonstrate computer literacy.		X				X	X

VII. RELATION OF ENDORSEMENT TO OTHER UNIVERSITY PROGRAMS

Although there are non-university programs that address solid waste (such as RACEJT, SWANA, EPA Brownfields, AFE Environmental Apprenticeship), there is currently no university program of study designed specifically to serve rural students in waste management and spill response. Tribal utility management courses, which may appear to be similar, focus on water and wastewater utilities. Additionally, the Safety, Health, and Environmental Awareness Technology Certificate program focusses on safety related industrial fields. Thus, this OE does not duplicate other programs statewide and could support other UAF program such as the Tribal Management and Environmental Studies Certificates.

VIII. IMPLEMENTATION/TERMINATION

A. DATE OF IMPLEMENTATION

The program is expected to be in the UAF catalog and available in the Fall semester of 2015. All required courses already exists as catalog UAF courses approved by the Faculty Senate.

B. PLANS FOR RECRUITING STUDENTS

The promotion of this new program will be done throughout the state in cooperation with local and tribal governments, local for-profit and nonprofit Native corporations, rural University campuses and centers, and the urban Fairbanks campus. Upon approval, the UAF BBC is prepared to market the program with brochures, on UAF BBC's current website, and other conventional methods of student recruitment.

Rural tribal councils, local nonprofits, and local for-profit corporations will be encouraged to organize and support students in this recruitment endeavor. Organizations such as BBNA, SWAMC, Kawerak, TCC, Maniilaq, Kuskokwim Watershed Council, and RuralCap will continue to have a need for waste management workers or will know of needs in the communities that they serve. These organizations may also provide financial support to students/employees enrolled in this OE. The UAF BBC Environmental Studies Program, as well as other UAF CRCD departments, regularly attends conferences and job fairs, hosts high school field trips, and participates in community outreach activities. Attendance at these events is partly an attempt to recruit students into academic pathways such as OEs and certificates. Communities and partners across Alaska are supportive of an educational program that works to develop waste managers and possibly help successfully transition more community members into higher education. It should be noted that the market is already preparing to take advantage of the coursework.

For example, RACEJT offers training aligned with the OE and the program launches an intensive recruitment effort each Fall Semester for a 6-8 week application open period. Recruitment includes: rural radio Public Service Announcements (including Yup'ik language in the Bethel area), blast fax to all rural Tribal Councils, emails to the bulk of rural community environmental programs, announcements in a statewide rural waste newsletter, networking with regional workforce development offices, regional environmental programs, and State regional Job Centers, and information sharing via webinars, website, and informational teleconferences. Since 2011, the final applicant pool averages 29 to 30 students. The selected program cohort each year has been reflective of the applicant pool and averages 95% Alaska Native, and 70 percent male.

C. PLANS FOR PHASING OUT PROGRAM IF UNSUCCESSFUL

As this program does not involve new equipment or other major program investment, the phasing out process should only involve the issuance of endorsement completion by existing students. If it becomes necessary to close the program, Rural Waste Management and Spill Response Technician students will be provided the opportunity to complete the University requirements for the OE.

D. ASSESSMENT OF THE PROGRAM

The program will be assessed through ongoing and periodic student and faculty evaluations, and using success of students via to the Student Outcomes Assessment Plan. This assessment will consist of monitoring student recruitment, retention, and progress while in the program. It will also include the results of program surveys of students and alumni as well as partner organizations. The full Student Outcomes Assessment Plan is found in Appendix A.

Appendix A

Occupational Endorsement Rural Waste Management and Spill Response Technician Student Outcomes Assessment Plan

Expanded Statement of Institutional Purpose	Intended Objectives/Outcomes	Assessment Criteria and Procedures	Implementation (what, when, who)
<p>MISSION STATEMENT: Provide Alaska Native and rural students with quality academic instruction and training that is responsive to community, government, and industry needs and empowers graduates to protect and enrich rural communities.</p> <p>GOAL STATEMENT: Rural Waste Management and Spill Response Technician OE graduates will possess the necessary interdisciplinary skills needed for entry-level employment as a rural waste management or spill response technician.</p>	<p>1. Students completing the OE in Rural Waste Management and Spill Response Technician will be prepared academically and vocationally for entry-level employment in the field of waste management and spill response.</p> <p>2. Students completing the OE in Rural Waste Management and Spill Response Technician will seek or gain employment or advance into other science or engineering related undergraduate course work including Certificate, Associate or Baccalaureate programs.</p>	<p>1. Individual Student Learning Outcomes Assessment Rubric</p> <p>2. Student survey post-graduation to document job seeking efforts, employment, or enrollment in additional undergraduate program</p>	<p>1. Completed by Program Coordinator</p> <p>2. Completed by Program Coordinator</p>

Occupation Endorsement in Solid Waste Management Course

Individual Learning Outcomes Assessment Rubric

Outcomes	Expectations	Rating
Academic Performance		0-5
<ul style="list-style-type: none"> • Accumulated student GPA in required courses 	A Grade Point Average of ‘C’ (2.0) or above in OE in Rural Waste Management and Spill Response courses (Rating scale: A=5, B=4, C=3)	
Academic Involvement and Documentation		0-5
<ul style="list-style-type: none"> • Obtain associated endorsements or certifications associated with course content (e.g. First Aid/CPR, HAZWOPER, OSHA 10 hour) • Demonstrates understanding of course content 	<p>Students will provide documentation of successful attainment of associated endorsements</p> <p>Actively participates in Rural Waste Management and Spill Response training by discussing or commenting on relevant issues</p>	
Cooperative Learning		0-5
<ul style="list-style-type: none"> • Reflective and open to feedback from others • Motivated to work with others on projects • Eager to learn from others 	<p>Cooperative behavior.</p> <p>Participates and completes projects with other students</p> <p>Willingness to involve other students in projects.</p>	
General Conceptual Understanding of Rural Solid Waste Management		0-5
<ul style="list-style-type: none"> • Dedicated to being building a career • Professional involvement 	<p>Reads waste management literature associated with coursework</p> <p>Attends or joins technical conferences such as Alaska Forum on the Environment or the Alaska Tribal Conference on Environmental Management</p>	
Job Preparedness		0-5
<ul style="list-style-type: none"> • The student acquired the necessary skills for an entry-level Rural Waste Management and Spill Response training. • Students will document employment or enrollment in another degree or training program. 	<p>Prepared to apply for job or obtain employment upon completion of OE with a professional resume and interview training.</p> <p>Students will provide documentation of successful attainment of employment or educational enrollment</p>	
Score (Total =25, score greater than 17.5 or 70% suggests learning objectives for student were met)		

d

Appendix B



Zender Environmental Health and Research Group

<http://www.zendergroup.org>
907-277-2111

Mailing Address: 310 E 10th Ave, Anchorage AK 99501
Office Location: 308 G St, Ste #312, Anchorage AK 99501

Dr. Deborah McLean
Bristol Bay Campus Director
UAF Bristol Bay Campus
527 Seward St.
P. O. Box 1070
Dillingham, AK 99576

Dear Dr. McLean,

Zender Environmental Health and Research Group, a not-for-profit 501(c)3 organization, is dedicated to serving rural Alaska communities in building capacity for environmental programs and projects. As you are aware, we operate the Rural Alaska Community Environmental Job Training Program, known as RACEJT ("Race jet"). This letter is to apprise you of our interest in, and confirm our leveraging commitment to, development of an Occupational Endorsement for a Rural Environmental Technician through the UAF College of Rural and Community Development.

Entering RACEJT's 3rd program year, we have successfully trained 38 local unemployed and underemployed rural residents in skills needed to safely and effectively serve their communities as environmental technicians. For 89% of our graduates thus far, we've been able to either place them in full- or part-time jobs or, for those underemployed, to increase their wages or hours. In large part, this is because prior to beginning RACEJT, we spent several months soliciting feedback from environmental employers such as project contractors, tribal environmental programs, and community and regional Brownfield programs. We used this information, in conjunction with the knowledge we garner from providing five trainings to some 45 to 60 village environmental programs and technical assistance to some 35 to 60 villages each year, to form our 168-hour curriculum. We continue to solicit feedback each year from graduates as well as employers to ascertain any modifications that might best serve the purpose of our trainees being hired, and that might best serve trainees in acquiring knowledge most applicable to the issues and practices they are hired to address.

We see a strong advantage in partnering with your campus to develop an Occupational Endorsement that generally reflects RACEJT's curriculum. For RACEJT, the specific intent is to train environmental technicians skilled and knowledgeable enough to apply environmental concepts and principles in implementing best practices that result in maximum protection of community environmental health and well-being. An Occupational Endorsement can buffet this outcome for reasons including:

1. Enrollment in an Occupational Endorsement Program in conjunction with participation in RACEJT will provide a number of additional avenues by which we may be able to secure travel and tuition funding for our trainees. Because of the extreme economic straits our trainees are in, it is RACEJT's goal to furnish or find full travel costs for the four weeks that trainees are away from their village attending the RACEJT program. Without adequate

The mission of Zender Environmental Health and Research Group, a non-profit 501(c)3 organization, is to assist underserved communities in developing programmatic capacity and community resiliency in environmental health issues. Visit us on the web at www.zendergroup.org

funding, we tend to have poorer recruitment and retention, and may need to sacrifice course content, extracurricular support activities, or tracking and placement efforts.

2. In many, if not most, of our trainees, we witness self-empowerment grow as they progress through the training program. It is often the first notable achievement they have had since high school graduation (or GED). Completing a college Occupational Endorsement will further boost our trainees' esteem, and their increased confidence may result in better placement rates, higher wages, and greater job retention and advancement.

3. An Occupational Endorsement will impress prospective employers and should result in increased opportunities for our graduates to secure a job.

We believe at the same time we offer advantages to UAF:

1. We are able to leverage our staff time in recruiting, selecting, teaching, retaining, graduating, and placing your students (i.e. our trainees). We currently receive our primary funding from our second multi-year USEPA Environmental Workforce and Job Training Development grant and from the Alaska State Department of Labor State Training and Employment Program. With our successes in job placement and trainee retention, we've established a solid track record here, and anticipate continued funding in the future. In particular, we can supply well-qualified instructors (either our employees or subcontractors) and stable class offerings, year-by-year.
2. Our retention rate ranges from 89% to 94%. We have a strong retention support program during the training. We can increase overall graduation rates for UAF programs.
3. Our high placement rate translates to community usefulness and relevance. UAF alumni become entrained within rural communities with significant positive, visible environmental and economic impact.
4. After determining they are capable of completing post-secondary education, several of our graduates each year decide they would like to enter the college system for additional education, to establish environmental and other careers. RACEJT can serve as a feeder program for the UAF system.

RACEJT and your campus share a purpose-- educating, training, and empowering local residents in rural communities. I hope that you will consider partnering with RACEJT to develop an OE for Environmental Technician that allows our graduates who pass all RACEJT courses to claim such as worthy certification. You have our organization's full commitment in making this goal a reality. Please let me know if you have any questions, and how you would like us to proceed on our end.

Sincerely,


Lynn Zender

Lynn Zender, Ph.D.
Executive Director
Zender Environmental Health and Research Group
Tel: 1 907 277 2111 Cell: 1 907 444 5535 (free call for rural Alaska GCI cell phones)
Fax (efax): (877) 335 6780
Email: lzender@zendergroup.org

The mission of Zender Environmental Health and Research Group, a non-profit 501(c)3 organization, is to assist underserved communities in developing programmatic capacity and community resiliency in environmental health issues. Visit us on the web at www.zendergroup.org



THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

Department of Environmental
Conservation

DIVISION OF ENVIRONMENTAL HEALTH
Solid Waste Program

555 Cordova Street
Anchorage, Alaska 99501
Main: 907.269.7642
fax: 907.269.7600

December 20, 2013

Deborah McLean, Ed.D.
Director
University of Alaska Fairbanks
Bristol Bay Campus
P.O. Box 1070
Dillingham, AK 99576

Subject: Support for Occupational Endorsement Training

Dear Dr. McLean:

The Alaska Department of Environmental Conservation (ADEC), Solid Waste Program regulates the municipal solid waste facilities in rural Alaskan villages and provides technical assistance for developing and maintain the landfill. ADEC's goal is to promote best management practices for the rural facility's, helping villages operate their landfills in a manner that is not a threat to human or environmental health and meets the requirements of State of Alaska regulations 18 AAC 60. Over the past two years, ADEC Solid waste Program staff have visited over 110 villages and evaluated the landfills using our Waste Index as a measurement tool. ADEC supports the efforts of the Occupational Endorsement to train village administrators and landfill operators in best management practices for rural landfills.

Some 61% percent of village sites scored low enough to be considered substandard. The reasons are complex, but it is clear that trained, knowledgeable landfill operators can minimize impact from the site and make a substantial difference in reducing the risk to public health and the environment. A trained landfill operator, waste collector, resource recovery technician, etc. can ensure that the rural landfills are consolidated and compacted to the extent possible, that hazardous wastes are separated in a safe manner and if needed, wastes are burned in a manner that best protects community health and minimizes fire danger.

The difference between a well-managed landfill and one with poor management is significant and compelling. Local workers need the "tools", in the form of both equipment and training to be successful at the landfill. Class III landfills have many unique challenges not found in the larger Class I landfills found in urban areas. Some of these challenges include; lack of infrastructure available, the high transportation costs of shipping waste out, poor economy of scale and high water table. These factors combine with basic landfill design and fewer safeguards in the landfill require villages to manage these sites using innovative, creative and often low cost landfill solutions. Village environmental specialists and rural landfill operators need a base of waste management knowledge and training to make important decisions at the landfill. With that, they can be as effective as possible in creating the best solid waste management plan and landfill operations plan for their community.

The Solid Waste Program has reviewed the proposed Occupational Endorsement and supports it as providing the skills and training necessary for entry-level rural technicians. Please contact me at (907) 269-7642 or by email at doug.huntman@alaska.gov if you have any question, comments, or if I can be of assistance.

Sincerely

A handwritten signature in black ink, appearing to read "D Huntman".

Doug Huntman
Environmental Program Specialist

December 19, 2013

Deborah McLean, Ed.D.
Director
University of Alaska Fairbanks
Bristol Bay Campus
P.O. Box 1070
Dillingham, AK 99576
907-842-5109

Dear Dr. McLean,

Alaska Native Tribal Health Consortium provides environmental health, community health, and sanitation engineering services for Tribal communities across the state. As the Brownfield Response Program Coordinator as well as an Environmental Health Officer, my position provides technical assistance and program mentoring to the regional and community Brownfield Response Programs in the State.

Brownfields are sites (facilities or lands) that have potential or documented contamination that is preventing the reuse of the property for community benefit. There are countless confirmed brownfields and contaminated sites in the State database. In inventorying, assessing, and cleaning up these sites, the rural communities have a great need for local workforce training. Performing work where hazardous contaminants, wastes, and materials are potentially present requires adequate knowledge in preventing spills and releases, and responding to their incidents should they occur. Water and soil sampling, basic first aid, and knowledge of the appropriate terminology is generally needed. The critical nature of the work reinforces the need for technicians to understand the importance of dependability on the job.

I've examined the proposed Occupational Endorsement for Rural Waste Management and Spill Response Technician and find it adequately provides the basic education needed for serving in such positions as Contaminated Site Worker, Community Brownfield Program Manager, Emergency Response Worker, and Solid/Hazardous Waste Program Technician.

I heartily support your efforts in passing the Endorsement and providing an avenue by which rural residents can obtain the necessary knowledge base and be recognized for their efforts in advancing their education.

Please let me know if you have any additional questions. You may contact me at 907-729-3490.


Kimberly J. Smith
ANTHC Tribal Response Program Coordinator



**Bristol Bay Area
Health Corporation**
6000 Kanakanak Road
P.O. Box 130
Dillingham, AK 99576
(907) 842-5201
800-678-5201
FAX (907) 842-9254

*Bristol Bay Area
Health Corporation is
a tribal organization
representing 34
villages in
Southwest Alaska:*

- Aleknagik
- Chignik Bay
- Chignik Lagoon
- Chignik Lake
- Clark's Point
- Dillingham
- Egegik
- Ekuk
- Ekwok
- Goodnews Bay
- Igloogig
- Iliamna
- Ivanof Bay
- Kanatak
- King Salmon
- Knugak
- Kolchanok
- Kaligasek
- Levelock
- Menokotak
- Naknek
- New Stuyahok
- Newhalen
- Nondalton
- Pedro Bay
- Perryville
- Pilot Point
- Pitmeke
- Port Heiden
- Portage Creek
- South Naknek
- Togiak
- Twin Hills
- Ugashik

*To promote health
with competence,
a caring attitude &
cultural sensitivity.*

Deborah McLean, Ed.D.
Director
University of Alaska Fairbanks
Bristol Bay Campus
P.O. Box 1070
Dillingham, AK 99576
907-842-5109

Dear Dr. McLean,

The Bristol Bay Area Health Corporation (BBAHC) serves 34 villages in Southwest Alaska. BBAHC is aware of the need for locally trained technicians to properly manage wastes and reduce the health and environmental risk that these hazards pose to our residents.

When hazardous wastes and materials, including fuel oil, leak or spill in these communities, our residents are often the first responders. Properly trained workers are essential in effective response efforts. The responders must be able to safely handle wastes to protect themselves and safeguard community health. The program can also empower our region with trained individuals that can be called upon for quick response to marine spills and other disasters.

I have reviewed the Occupational Endorsement for Rural Waste Management and Spill Response Technician proposed by UAF Bristol Bay Campus. I find it to be an appropriate training program for preparing workers for local technician work and I enthusiastically support its approval and passage. I commend the Bristol Bay Campus' efforts for developing this program that reflects rural community needs.

Sincerely,

A handwritten signature in cursive script, appearing to read "Robert Clark".

Robert Clark, President and CEO
Bristol Bay Area Health Corporation

BRISTOL BAY NATIVE ASSOCIATION

P.O. BOX 310
DILLINGHAM, ALASKA 99576
PHONE (907) 842-5257

December 12, 2013

Deborah McLean, Ed.D.
Director, UAF Bristol Bay Campus
P.O. Box 1070
Dillingham, AK 99576
907-842-5109

Tribal Council
Served by BBNAs:

Atkasgic
Chukchi Bay

Chukchi Lagoon

Chukchi Lake

Chukchi Point

Chukchi

Chukchi

Chukchi

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RE: Occupational Endorsement for Rural Waste Management and Spill Response Technician

Dear Dr. McLean,

Bristol Bay Native Association (BBNA) serves thirty-one villages in the Bristol Bay area with a variety of functions. Our villages face very difficult solid waste circumstances and most must manage with inferior waste disposal facilities. There is a substantial need for local city and tribal waste workers to knowledgeably manage their programs and to minimize health and environmental risks.

With hazardous waste management, comes the educational and skills needed to safely respond to spills. With the remote locations, our waste workers and other local residents are first responders. The communities need trained staff to manage wastes and small spills in a manner that best protects community health and the environment. Trained responders likewise assist our region in the case of larger marine spills or other environmental disasters.

BBNA's Environmental Program works closely with tribal environmental programs on a host of environmental issues. Properly managing solid and hazardous waste is an important component of their programs and integral to optimizing the life of landfill facilities. Virtually all of the tribal environmental programs in our region have identified solid and hazardous waste as a high priority as well as having the capabilities to respond to releases.

I have reviewed the Occupational Endorsement for Rural Waste Management and Spill Response Technician. It is fully appropriate for local technician work and we enthusiastically support its approval and passage. I am happy to see our local campus initiate this effort.

Should you have any additional questions, you may contact me at 842-6241 or by email at sflensburg@bbna.com.

Sincerely,



Susan Flensburg, Environmental Program Manager
Bristol Bay Native Association



TEL: (907) 443-5231 • FAX: (907) 443-4462

- SERVING THE
- VILLAGES OF:
- BARFUG MISSION
- COUNCIL
- DICKENS
- ELM
- GANSELL
- GOLDWIN
- KING ISLAND
- KOYUK
- MARYS IGLOO
- NOME
- SAWCONSA
- SARHTUDJIK
- SHISHIMAREF
- SOLOMON
- STERRINE
- ST. MICHAEL
- TELLER
- UNIKAKDET
- WALES
- WHITE MOUNTAIN

Deborah McLean, Ed.D.
Director
University of Alaska Fairbanks
Bristol Bay Campus
P.O. Box 1070
Dillingham, AK 99576
907-842-5109

Re: Letter of Support

Dear Dr. McLean,

Kawerak is the regional non-profit corporation which provides services throughout the Bering Strait Region to our 20 tribes. Kawerak contracts with the state and federal government to provide services to regional residents with programs ranging from education to childcare, and natural resource management to economic development. Kawerak seeks to improve the Region's social, economic, educational, cultural and political conditions. Our organization is keenly aware of the substandard solid waste conditions in each of our communities and the need for locally trained technicians to properly manage wastes and reduce the numerous health and environmental risks posed to our residents. Additionally, with growing vessel traffic in the Bering Sea, our region needs trained individuals that the region is able to call on for quick local response to marine spills and other disasters.

In 2010, Kawerak began a program to help regional communities backhaul easily recyclable items such as lead-acid batteries, electronic waste, fluorescent bulbs, household batteries, scrap metal, aluminum cans and plastic bottles. Prior to 2010 these items were not segregated from the burn piles at the local landfills. Three years later, with 18 EPA environmental programs in our region, we have removed and recycled over 100,000 pounds of potentially hazardous material from our villages. With the help of many great organizations such as Zender Group, EPA, RurAL CAP, Total Reclaim, Yukon River Inter-Tribal Watershed Council, and ANTHC, we have been able to make our rural communities healthier places to live.

We have reviewed the Occupational Endorsement for Rural Waste Management and Spill Response Technician. I find it fully adequate to train our residents for local technician work and enthusiastically support its approval and passage. I commend the University's efforts for developing this program that reflects rural community needs.

We look forward to our continued partnership with Zender Group and we support their efforts. Please feel free to contact our Environmental Coordinator, Anahma Shannon at (907) 443-4249 if you have questions or need further information.

Sincerely,
KAWERAK, INC.

Melanie Bahnke, President

NORTHWEST ARCTIC BOROUGH
P.O. BOX 1110
KOTZEBUE, ALASKA 99752
(907) 442-2500 / FAX (907) 442-2930

Deborah McLean, Ed.D.
University of Alaska Fairbanks
Bristol Bay Campus
P.O. Box 1070
Dillingham, AK 99576

December 5, 2013

Re: Occupational Endorsement for Rural Waste Management and Spill Response Technician

Dear Dr. McLean:

The Northwest Arctic Borough, based in the hub community of Kotzebue, off the Chukchi Sea, works with the 11 villages in our region to provide a variety of public service functions. We are pleased to support approval and passage of the Occupational Endorsement (OE) for Rural Waste Management and Spill Response Technician.

The Borough recognizes the need to address the unique, ever increasing challenges of waste management in these remote communities, including hazardous waste and material spills. Mining and offshore development are a reality, as is the risk of large hazardous spills. Our residents are the first responders.

As the Grants and Community Development Administrator for the Borough, my position is to identify, procure, and administer resources that foster and support appropriate community development in the region. One current project is a multi-year effort to improve region-wide waste management. However, it does not address the need for trained, knowledgeable local staff that can safely handle wastes, and respond quickly and effectively to spills and other disasters.

The Occupational Endorsement for Rural Waste Management and Spill Response Technician is fully adequate to train our residents for this work which will also prevent or reduce numerous related public and environmental health risks. It will also enhance local workforce development.

The Bristol Bay Campus' efforts in developing this program to address rural community needs are commendable. Perhaps it can be extended to our local UAF Chukchi Campus. Again, we strongly support the approval and passage of this Occupational Endorsement.

If you have any questions or if I can be of any assistance, please feel free to contact me at (907) 442-2500 ext. 119 or aalvite@nwabor.org.

Sincerely,


Annabelle Alvite, Administrator
Grants and Community Development

Cc: Reggie Joule, Mayor

Anchler · Buckland · Candia · Deering · Kiana · Kivalina · Kobuk · Kotzebue · Noatak · Noorvik · Selawik · Shungnak



Southwest Alaska Municipal Conference

3300 Arctic Boulevard, Suite 203 Anchorage, AK 99503 p: 907.562.7380 www.swamc.org

Alaska Peninsula
Aleutian Chain
Bristol Bay
Kodiak Island
Pribilof Islands

Deborah McLean, Ed.D.

University of Alaska Fairbanks
Bristol Bay Campus
P.O. Box 1070
Dillingham, AK 99576

Dear Dr. McLean,

The Southwest Alaska Municipal Conference (SWAMC) serves as the economic development district for the Southwest region, including Bristol Bay. As an organization interested in training our workforce and also reliant on the health of our environment and ecosystems, SWAMC is keenly aware of the need for locally trained technicians to properly manage wastes and reduce the numerous health and environmental risks posed to our residents. Hand in hand with solid waste management is the need for knowledgeable local staff to handle spill response and react swiftly and confidently.

When hazardous wastes and materials, including fuel oil, leak or spill in rural communities, local residents are oftentimes the first responders. Properly trained workers that can safely handle wastes and small spills- and respond appropriately to large spills- are needed to safeguard community health. Additionally, our region needs trained individuals that can be called upon for quick response to marine spills and other disasters. This fact will only become more apparent as more and more vessels navigate the opening Arctic traffic lanes.

SWAMC's mission is to advance the collective interests of Southwest Alaska people, businesses, and communities, and to help promote economic opportunities to improve quality of life and influence long-term responsible development. New workforce opportunities coupled with environmental stewardship present a win-win proposition for our region.

I have reviewed the Occupational Endorsement for Rural Waste Management and Spill Response Technician proposed by UAF Bristol Bay Campus. I find it to be an appropriate training program for preparing workers for local technician work and I enthusiastically support its approval and passage. I commend the Bristol Bay Campus' efforts for developing this program that reflects rural community needs.

Please contact me should you have any additional questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Varner", written over a light blue horizontal line.

Andy Varner
Executive Director

Economic development and advocacy for Southwest Alaska
Economic Development District (EDD) and Alaska Regional Development Organization (ARDOR)

Signature page

C. PROVISION FOR REVIEW SIGNATURES OF PREPARATION:

CRCO Science Department Chairman

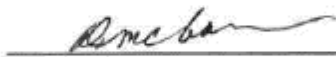
Date



13 - Dec - 2014

ENVI Program Head

Date



Dec. 15, 2014

Director, UAF Bristol Bay Campus

Date

Dean, College of Rural and Community Development

Date

**College of Rural and Community Development
Academic Council**

Date

SIGNATURES FOR APPROVAL:

Curricular Affairs Committee Chair

Date

President, UAF Faculty Senate

Date