SPAR Annual Report

FISCAL YEAR 2016

DEC | SPILL PREVENTION AND RESPONSE

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
SPILL PREVENTION AND RESPONSE DIVISION
INTEGRATED ANNUAL REPORT
FISCAL YEAR 2016 (FY16)

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1.0 A Note from the Director

It's important to glance at our recent past, as we remember this year's work, and set goals for the future.

Looking back:

The Division of Spill Prevention and Response (SPAR) realized several major accomplishments in 2015, which have benefited our Division this past year, and will continue to be of value in successive years:

- In July 2015, SPAR underwent a major reorganization combining two programs to achieve efficiencies (the FY16 oil and hazardous budget was reduced by $620 thousand dollars).
- We operated with fewer resources and less staff, when an additional Department-wide unallocated general fund budget reduction was imposed by the legislature in FY16. SPAR absorbed $208 thousand dollars of the unallocated reduction.
- We obtained much needed additional funding to continue the important work we do. With declining oil revenue, our funds for prevention and response were also declining. House Bill 158 was passed, implementing a refined fuel surcharge to sustain our work.

Our more recent work:

As a continuation from last year, SPAR is still in the process of improvement. We are reducing travel, employing technology like Skype, and project management tools such as SharePoint, to accomplish our work as efficiently as possible. We have fewer staff, but the same workload to achieve statutory obligations to protect the environment. As you read through the pages of this report, there will be highlights, major accomplishments, and goals for each program. I'd like to summarize a few that stand out for me.

Our new program, Prevention Preparedness and Response (PPR), celebrated its one year anniversary July 2016. This has been a difficult process. The reorganization has been carefully planned, with internal workgroups and external stakeholders providing input on how to best accomplish our mutual needs. The reorganization took time to articulate and implement. This newly formed program merged the work of responders and contingency planners into a unified team, dedicated to efficient delivery of plans, drills, and response efforts. Our goal was to ensure greater consistency between planning, preparedness and response which we are well on our way of achieving. This is a notable success.

We also achieved reduction in costs (partially through attrition and unfilled vacancies), improved cost recovery efforts, implemented new Cost Recovery regulations in the Spring of 2016, and several other regulations throughout the year related to cleanup of spills and contingency planning.

The division has processed many regulatory updates that were long overdue. The updates utilized the current science to provide the best guidance. Several packages eliminated requirements that were no longer necessary, reducing the regulatory burden. While the frequency of updates may have seemed brisk, we have found regular, smaller regulatory packages are more easily processed by the public. In the past, we tended to publish entire regulatory chapter rewrites, which were difficult to absorb and identify the changes.

PPR staff have trained and cross-trained, evaluating and improving the work they do. The training component of restructuring is time consuming, but an important aspect of preparing our employees to deliver the best work products in the most efficient manner possible. This is an investment of time and knowledge that will bear returns in the future. The same evaluation process and training has been employed by our Contaminated Sites (CS) Program. This program successfully completed the cleanup of the Wrangell Junkyard, a languishing contaminated site filled with lead from automobile batteries. You will want to read more about this project in the pages ahead under the Contaminated Sites Program sections.

In FY16, we have continued to focus on prevention of spills. PPR has launched a regulatory initiative to reach out to Class 2 fuel storage facilities (those storing between 1,000 and 420,000 gallons), which are a type of facility we have not worked with in the past, yet one in which fuel spills are frequent. Because we have not worked with these facilities in a preventative way previously, we are initially requesting they register with us so we can know who they are and can start providing technical assistance. As part of this initiative we reclassified an existing position into one that will specialize in providing assistance to these facilities.

Looking ahead:

Prevention is key for our work in fiscal year 2017 (FY17), and fiscal year 2018 (FY18).

We will analyze our processes for contingency plans in the coming year, through the lens of Lean Management (a continual improvement system utilized by Toyota Manufacturing). In our analysis, staff will be seeking goal-oriented efficient processes. We hope to enhance creativity and the value of collaborative teamwork in the process.

We will be updating handbooks, guidance documents, and other training tools that are frequently utilized by staff and the public as they navigate our requirements. We will continue our push to improve data management systems, to simplify the process used by the public to interact with us and provide the information the public needs.

We will be ramping up efforts to provide technical assistance to Class 2 fuel storage facilities by creating training and guidance books, conducting frequent visits, and establishing relationships with these operators. This is a critical part of our prevention efforts since a large percentage of our current spills occur at these facilities.

During the next year we will invest significant resources to restructure government planning in Alaska in coordination with the U.S. Coast Guard (USCG) and U.S. Environmental Protection

Agency (EPA). This is a major undertaking with the goal of shifting spill preparedness and response decision making down to the communities. This effort will dovetail with our effort to improve drills and exercises by developing an annual drill schedule, by region, and incorporating multiple companies within the region.

We will continue to advocate for an agreement between Canada and the United States that would establish some prevention standards on vessels of innocent passage. Alaska witnesses over 3,000 transits a year along its Southern border with the majority of those vessels in innocent passage, which puts them beyond state or federal oversight. Canada is experiencing a similar risk. Both countries could collaborate to establish some minimal standards.

Lastly, the State needs to reduce its liability associated with state-owned contaminated sites. Historically, Capital Improvement Program funds were utilized to clean them up. With resources dwindling, the Division will be inviting all the agencies that own contaminated land to participate in a process to rank these sites and approach them strategically. Prevention efforts will also be incorporated into this effort. Working to reduce this liability is an important step to prevent negative estate bond ratings for the State. A 1997 Memorandum of Agreement between the department and the majority of other state agencies is no longer functional, meaning a new approach must be developed. All impacted state agencies will need to be involved in a successful solution.

The division has accomplished a great deal in the past two years, but we have much work ahead as we continue to seek more efficient ways to do our jobs, while demonstrating good stewardship of our resources. We welcome ideas and suggestions for improvement, while we continue to provide superior protection to the people of Alaska and the environment.

Kristin Ryan

Kristin Ryan, Director

2.0 Report Overview

About our mission as it relates to the report: The mission of the Division of SPAR is to prevent spills of oil and hazardous substance, prepare for when a spill occurs, and respond rapidly to protect human health and the environment, while managing the long term cleanup of contaminated soil and groundwater in Alaska. This report details how we fulfill our mission.

About the division and its organization: SPAR is one of four divisions within the Alaska Department of Environmental Conservation (DEC). Our sister divisions are Environmental Health, Air Quality, and Water. Each serves an important role in conserving the environment. In SPAR our focus is on oil spills and spills involving hazardous substances, both inland and on water. The content of this report was compiled from three separate programs that comprise the Division of SPAR: Contaminated Sites (CS) Program, Prevention, Preparedness and Response (PPR) Program, and Response Fund Administration (RFA) Program.

About the report: The report pertains to the 2016 fiscal year from July 1, 2015 through June 30, 2016. We hope this report makes information readily available to readers who want to learn more about the Division.

The purpose of the SPAR Annual Report is to describe the work performed by the Division of SPAR, informing the general public and legislators of our efforts to prevent spills, reduce the number of spills, and mitigate the effects of spills. Some spills involve small quantities and/or are relatively easy to clean up. Other spills require more complex response efforts and/or long term remediation.

Each program has reported on regional efforts, program highlights (data analysis, accomplishments), and priorities. Our Annual Report Goals are:

- To detail the complexity and importance of the work we do;
- To provide transparent information on how we accomplish our work;
- To report the trends we have observed; and
- To express our goals and measure our progress.

About our audience and nature of the report: The SPAR Annual report is a public document. It contains no privileged content. The information in the report is not limited to experts in the oil industry, or state and federal government. Rather, the SPAR Annual Report is intended to be a comfortable read to all, providing an introduction and basic understanding of the work we do. It's true! Much of the work we perform is scientific in nature and highly technical, but we also want to share information in a more practical and user-friendly way. This is why we are providing the guiding principles of why

we perform the work (see our mission statement above). We hope you will read about the work we have accomplished throughout the state, and find the report straight-forward and informative.

The report is a yardstick that allows us to measure accomplishments, projects, and activities, while considering future work plans. As we work smarter, more efficiently, and more cost-effectively, we have a sense of pride in our work. We enjoy telling others about work projects we have completed and our goals for the future.

In addition to providing informative news to the public regarding our work, and measuring our goals, the SPAR Annual Report serves to assist our employees in the analysis of work priorities. That is to say, as we review our goals, we measure what we have accomplished, and the steps that remain, we also review our priorities. The report allows us to evaluate and adjust our priorities to align with our current needs. The annual report provides a snapshot of our progress, and a synopsis of the significant and important work we have performed.

Dedication: This annual analysis gives us a chance to pause, and recognize the staff who have worked diligently to carry out their assigned tasks, often quietly, without pomp or circumstance. Our leaders, project managers, program managers, responders and planners, trainers, regulators, environmental specialists, engineers and scientists, program coordinators, and our administrative staff all play important roles. Each person in the Division contributes to the success of SPAR. Each staff member should be immensely proud of the work we accomplish together. This report doesn't single out individual staff and the merits they have earned (our supervisors do a great job of commending those individuals), however the annual report is dedicated to all of SPAR, in gratitude and acknowledgement of their collective efforts.

Other resources: You may also want to visit our website at **http://dec.alaska.gov/spar/index.htm** for additional information. If you have questions while browsing the website or reading the Annual Report, please contact us so we may provide the information you need.

You may notice electronic hyperlinks within the report or appendices, guiding you to additional information. The links will provide more detail on subjects of interest (i.e. performance measures, the budget, various charts or graphs). Our goal was to prepare a limited volume of pages, rich in content, while refraining from duplicating other reports.

Notes: The Acronyms and Abbreviations section of this report is extensive. Not all terms contained in this section are referenced in the report narrative. Rather, this section is intended as an aid to help you recognize the meaning of abbreviated terms we use frequently.

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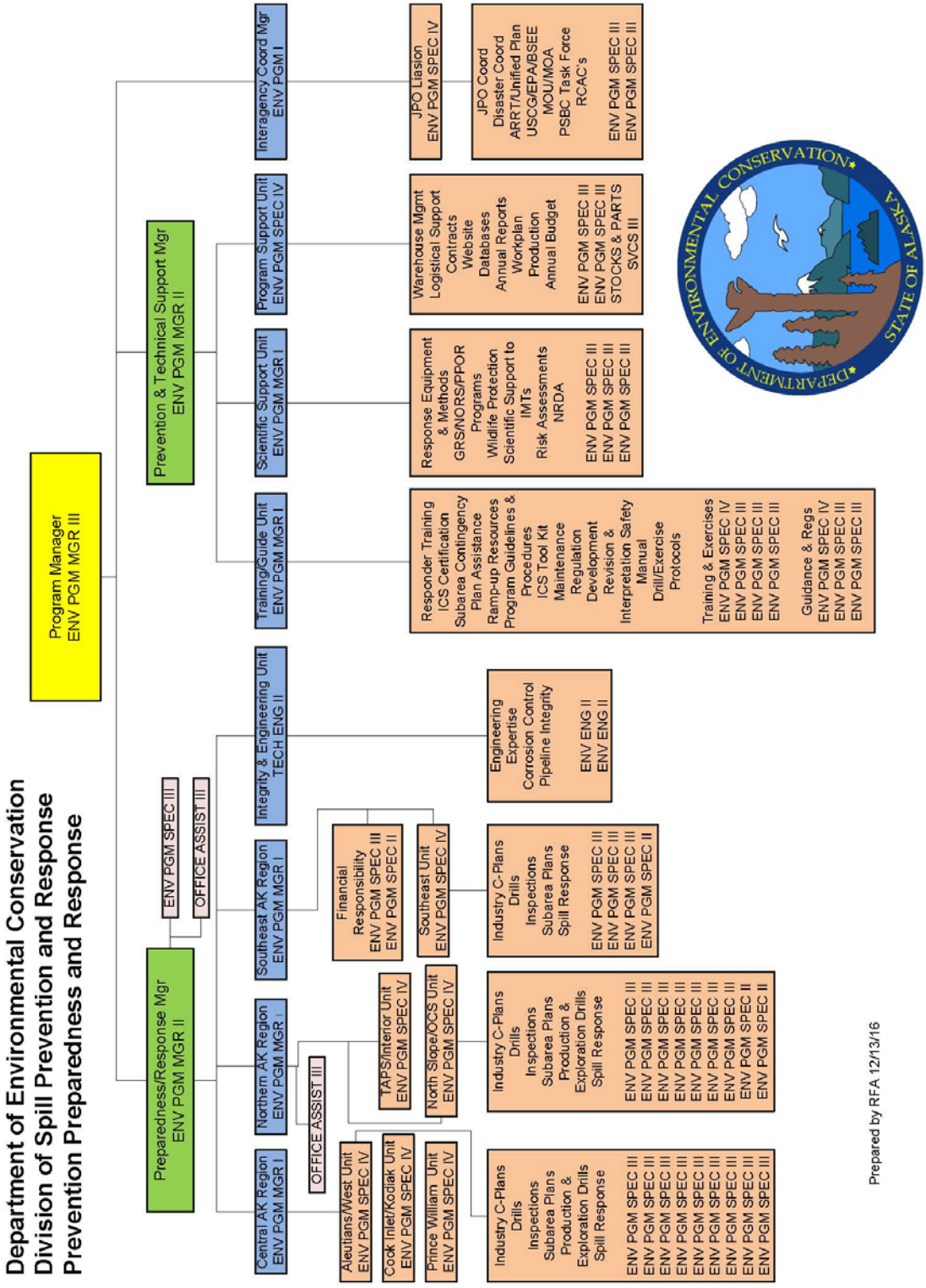
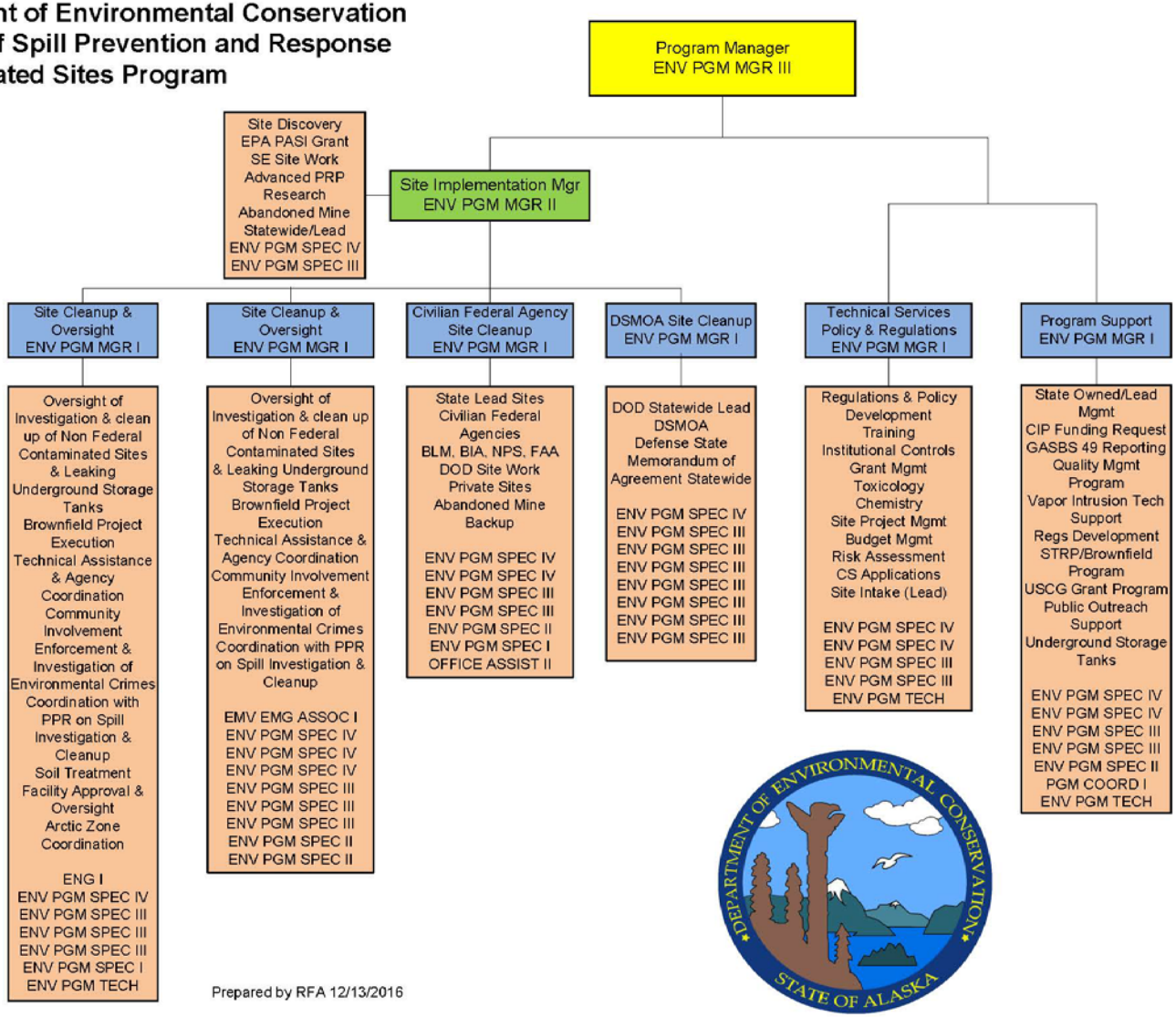
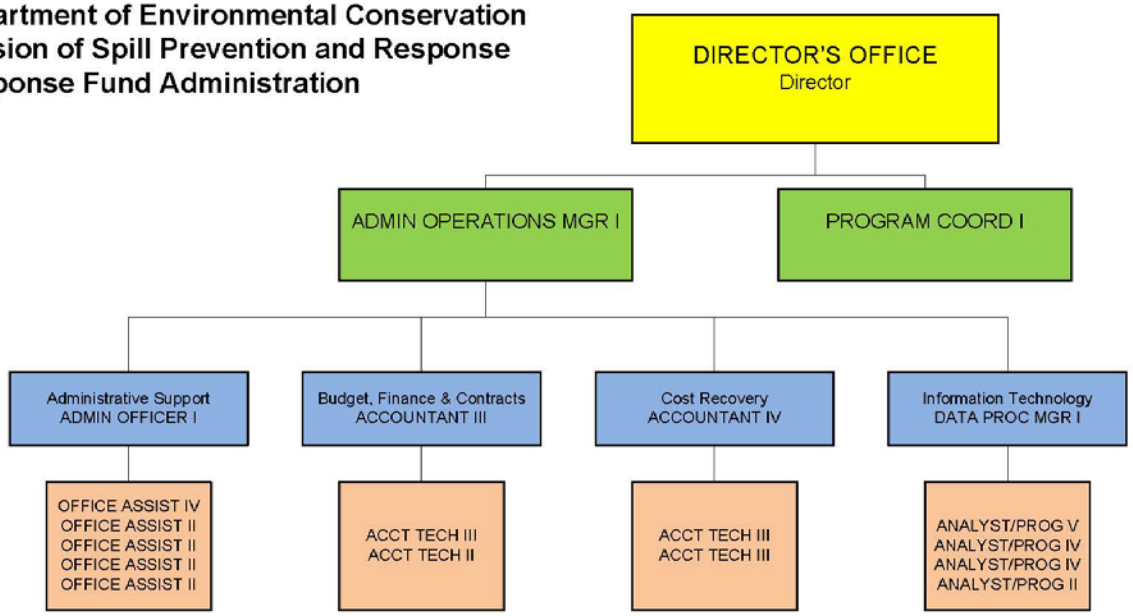
3.0 Division Structure (Functional Org Chart)



Department of Environmental Conservation
Division of Spill Prevention and Response
Contaminated Sites Program



Department of Environmental Conservation
Division of Spill Prevention and Response
Response Fund Administration



Prepared by RFA 12/13/16

4.0 PPR Statewide Matters

Geographic Response Strategy (GRS) project

DEC began a program to improve existing Geographical Response Strategies, using Coastal Impact Assistance Program funds to conduct field visits and deploy, test, and evaluate proposed tactics. Concurrently, DEC conducted community engagement sessions to enhance oil spill awareness during these deployments. GRS testing ensured proper tactics have been selected to match hydro geographic and environmental conditions at each site. Results were used to update these strategies, and the subarea committees will be engaged to review and approve these revisions. We are collaborating with spill response partners including USCG, EPA, National Park Service (NPS), Regional Citizens' Authority Councils (RCAC)s, Oil Spill Removal Organizations (OSRO)s, Primary Response Action Contractors (PRAC)s, industry, and others, to determine the best ways to optimize collaboration and outreach as we move forward, and we conducted our first DEC-led field deployment, evaluation, and outreach campaign near Nome on September 15, 2015. Subsequent, and similar, outreach and evaluation efforts were conducted in King Cove, Kodiak, and Kachemak Bay during FY16 with plans to engage additional communities in FY17. This outreach program educates locals about state-owned spill response equipment in their communities (see Local Response Equipment Cache section, below), how to access these supplies in an emergency, and how to safely utilize this equipment to deploy protective strategies, while also providing an opportunity for DEC personnel to inventory, organize, and evaluate the functionality of equipment within the caches, as well as to conduct GRS evaluations and community engagement.

DEC and USCG conducted a community outreach event in Kodiak which showcased how to access and safely use government-owned spill response equipment to deploy GRS, April 26, 2016 (Photo/DEC- Rick Bernhardt)

Local Response Equipment Caches (conex)

DEC maintains 56 response equipment caches across the State to support rapid response to oil spills. Because of the state's vast size and remoteness, local residents are frequently the first line of defense in responding to oil or hazardous substance releases. These caches provide trained local residents and partners with the equipment necessary for initial response. DEC applied received an extension and amendment to the scope of work for an Alaska Department of Natural Resources (DNR) funded project referenced above. During the GRS deployment and outreach effort, response

conexes in Dillingham, Kodiak, and King Cove were inspected and refurbished to support those communities.

While conducting GRS training with local responders in King Cove, DEC inventoried and organized DEC's spill response container, May 2016 (Photo/DEC- Rick Bernhardt)

Alaska Oil Spill Technology Symposium

On March 22 - 24, 2016, DEC, Prince William Sound (PWS) Oil Spill Recovery Institute, University of Alaska Fairbanks, and USCG hosted the third annual Alaska Oil Spill Technology Symposium. Speakers from regulatory agencies, industry, and academia came together to share information on new technology, ongoing research and lessons learned. The goal of this symposium is to help close gaps among these different groups and foster collaboration to improve existing technology, initiatives and incident management. This year's symposium focused on wildlife policies, resources, response capability, capacities, and limitations. The second day of the Symposium was devoted to presentations on advanced response equipment, new response techniques, and supporting research. The third day was optional and included an outdoor demonstration of response equipment. Feedback from attendees was very positive.

Statewide Hazardous Materials (Hazmat) Response Workgroup Activities

The Interagency Coordination Unit provides coordination and facilitation for the Statewide Hazmat Response Team and Work Group. The Statewide Hazmat Response Work Group has continued to grow, and now has over 25 participating entities including; local, State, Federal, military, private and industry hazmat response partners. The work group meets three times per year to discuss and/or update the following: statewide response capabilities, standardizing operating procedures, lessons learned from recent responses, training, exercises, funding, and other topics of interest. DEC, Division of Homeland Security & Emergency Management (DHS&EM),and the Statewide Hazmat Response Team sponsored the 2016 Hazmat Symposium in conjunction with the 2016 Alaska Shield exercise. The Symposium was developed to provide training on the Incident Command System, including maintaining command and control of an incident with responders cascading in from local, state and federal agencies. The Statewide Hazmat Response Teams responded to three separate

Training participants practiced controlling leaks from drums and gas cylinders during the 2016 Hazmat Symposium at the Anchorage Fire Training Center, April 2016 (Photo/DEC)

scenarios simulating releases of hazardous substances. The Hazmat Work Group's goal is to develop a long term training plan that maintains a high level of instruction, while fostering training opportunities for new participants.

Area Planning

The department in conjunction with EPA and USCG, has begun the process to adjust from the existing Unified Plan for oil spill and hazardous material releases to become consistent with the National Contingency Plan and the National Response Framework. Changing the format from a Unified Plan/Sub Area Plan to a Regional/Area Plan concept, will bring Alaska into alignment with the rest of the nation's structure and management process for oil spill and hazardous material responses. This process will take several months and require extensive coordination with stakeholders and the public. Additional information on the Unified Plan, National Contingency Plan and the National Response Framework is located on the Regional/Area Planning Proposal website at **http://dec.alaska.gov/spar/PPR/plans/regional_plan.htm**

Disaster Response

The Interagency Coordination (IAC) Section of the PPR program coordinated DEC assistance to one disaster event in the state: the Bethel School Fire in November 2015. This event received a state disaster declaration from the Governor. PPR continued work on the 2011 Birch Creek fire disaster contaminated soil land farming project. This project is anticipated to be completed by 2017. In addition, PPR continued to strengthen their working relationship with DHS&EM through participation in statewide all-hazard planning and intra-agency training opportunities, including Alaska Threat and Hazard Identification and Risk Assessment effort, Alaska Shield, Kodiak Thunder, and Continuity of Operations planning.

Community Outreach

IAC continues to promote and encourage community outreach and engagement, particularly in rural areas though multiple venues. A successful highlight for PPR includes providing four days of

intensive training for community members enrolled in the Rural Alaska Community Environmental Job Training Program (RACEJT), a grant funded program designed to provide environmental training and employment for unemployed residents in rural communities impacted by environmental health issues. Other efforts included multiple outreach presentations, interviews, and the creation of guidance materials for various conferences and venues on the benefits of spill prevention, Abandoned and Derelict Vessel mitigation, and Emergency management as a tool to increase rural resiliency.

In the Northwest Arctic Region, DEC staff coordinated with USCG and EPA partners on several occasions in spill prevention and response preparedness. During fall of 2015, North Slope/OCS Unit staff were key trainers in EPA's Nome HAZWOPER course. Additionally, unit staff presented in Nome regarding DEC's prevention, preparedness, and response capabilities. Similarly, in June 2016, staff presented at a spill preparedness seminar in Nome, also highlighting the importance of prompt spill reporting and spill prevention for smaller heating oil tanks. A primary focus of this outreach was to build key partnerships and invite local participation in the pending subarea plan renewal.

DEC Staff participated in the Interior Alaska Builders Association Home Show. Staff discussed recommended practices for inspection of home heating oil tanks. DEC personnel answered other questions and provided guidance for tank decommissioning, tank installation as well as preparing home heating oil tanks for floods and earthquakes.

The TAPS/Interior Unit participates regularly in the Haul Road Safety meetings. This gives DEC an opportunity to discuss spill trends, work that may be occurring along the Haul Road and learn of any construction initiatives that may impact spill response equipment mobilization.

Integrity and Engineering Unit

The Integrity and Engineering Unit (IEU) provided engineering support during assessments of regulated facilities for the State's oil spill prevention initiatives by applying knowledge of corrosion, metallurgical, hydraulic, structural, and arctic engineering. Many unique and state-of-the-art engineering practices are used in preventing spills to the State's land and waters. Facilities are often located in remote areas subjected to harsh northern climatic conditions. IEU's engineers applied knowledge of these practices and conditions in determining effective prevention methods and to assure informed and balanced decisions regarding the adequacy of structural integrity, inspection, maintenance, repair, and safety of high-volume, high-pressure pipelines, piping, and storage tanks used at regulated facilities throughout the State.

With IEU being an integral part of the Oil Discharge Prevention and Contingency Plan (ODPCP) reviewing process, IEU reviewed and provided engineering comments pertaining to spill prevention and best available technologies of 15 plans during FY16.

As for contributing to the PPR Program's overall effort in the continuing spill prevention program oversight, IEU continued to provide engineering support and training to plan managers for facility

inspections, follow-up request for information, and compliance actions. The scope of this service by IEU to the Program is within the framework of 18 AAC 75, Article 1 - Oil Pollution Prevention Requirements. IEU provides technical representation in consultations related to developing technologies and root cause investigations. IEU provides technical assistance on common and unique design and as-built issues relating to regulatory and code compliance requirements.

IEU continued to evaluate the optimal methodologies in implementing the well lines prevention program audits and field inspection. IEU, in coordination with the Northern Region's plan managers, performed field inspections of 198 well lines at five pads and drill sites on the North Slope within the Western and Eastern operating areas, respectively. IEU also reviewed integrity inspection and corrosion control records for 75 well lines that were inspected.

Although IEU had completed the initial review and inspection of all North Slope flow lines in FY15, IEU continued to monitor the integrity of high interest (to the State) flow lines of which failures could adversely impact the environment or the production. In FY16, IEU reviewed the integrity data of 12 such flow lines (with 20 more scheduled for review). IEU also performed special inspections of flow lines as warranted. In the first quarter of FY16, IEU, in coordination with the Northern Region's plan managers, performed visual assessment of 13 flow lines that had been affected by the flooding during the breakup in the spring of 2015. IEU continued to monitor the integrity of these flow lines through the flow line compliance evaluation program.

As importantly, IEU continued to provide engineering support in reviewing regulated storage tank designs, external and internal tank inspection reports, cathodic protection system evaluation reports for tanks and associated piping.

Underground Storage Tank Group

The Underground Storage Tank (UST) group's mission is protecting groundwater by preventing releases from regulated USTs and the associated piping. Regulated USTs include tanks and associated piping designed to contain more than 110 gallons of petroleum where more than ten percent of the system volume is below ground; they do not include farm or residential tanks of less than 1,100 gallons used for storing motor fuel for noncommercial purposes, or tanks used solely to store heating fuel for consumptive use on the premises where stored. The UST group is responsible for regulating over 990 USTs located at 458 facilities in Alaska.

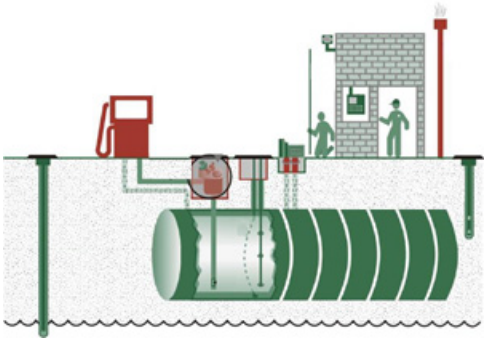


Diagram of commercial UST

One significant challenge faced by the UST group this year was working with small business owners of USTs who have limited resources and knowledge of regulations. The unit also is working diligently to get the latest update of 18 AAC 78 completed to incorporate all of the new 2015 federal UST rules that were released in October 2015.

Under the authority of Alaska UST regulations, the UST group:

- Regulates the design and operation of UST systems, ensuring that requirements are met for release detection, spill prevention, overfill prevention, corrosion prevention, and financial responsibility;
- Performs audits of UST inspections performed by third-party inspectors to insure quality inspections and to insure facilities are maintaining required UST systems between inspections (During FY16, the UST division reviewed third-party inspection reports for 351 tanks at 164 facilities);
- Provides technical assistance to the Department of Commerce and Economic Development with certification of UST workers;
- Regulates the work of certified UST workers performing installations, repairs, reconfigurations, closures, cathodic protection tests, tank tightness tests, and inspections;
- Ensures that tanks receive third-party inspections, and that failed inspections result in corrective actions;
- Coordinates with the Contaminated Sites Program on closure of USTs to ensure that sites contaminated by Leaking Underground Storage Tanks (LUST) are identified;
- Provides technical assistance to the public regarding UST issues.

Underground storage tank, October 1, 2013 (Photo/DEC)

In FY17, the CS Program will continue revising regulations to bring Alaska into alignment with new EPA regulatory requirements introduced by the federal Underground Storage Tank Compliance Act of 2005. The UST Coordinator meets with EPA and UST staff from other Region 10 states twice a year to discuss common issues, solutions to common problems and emerging issues.

State Pipeline Coordinator's Section / Joint Pipeline Office

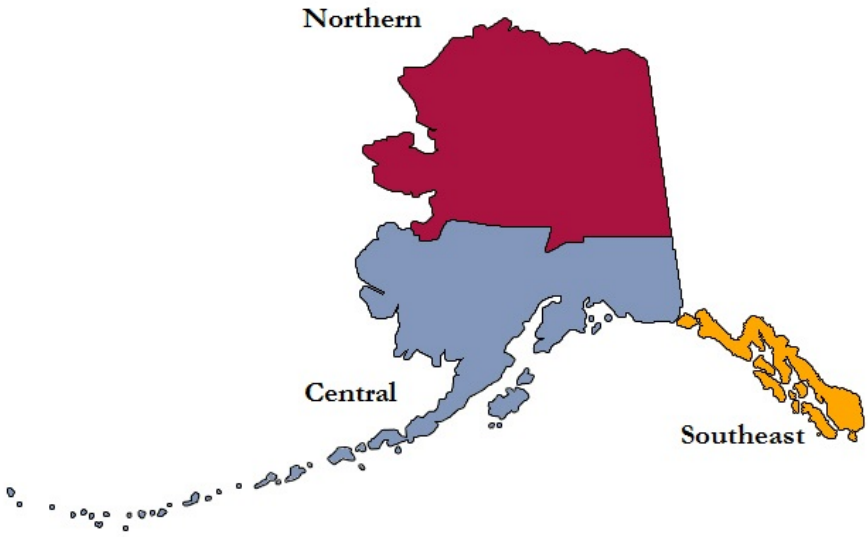
The Trans-Alaska Pipeline System/Interior Unit (TAPS/IU) provided oversight for the TAPS operations and the Prince William Sound Unit (PWSU) provided oversight for the Valdez Marine Terminal (VMT). Personnel completed 10 amendment application reviews, and several plan waiver

reviews; conducted and evaluated oil discharge exercises; conducted facility prevention and response readiness inspections; and worked with Alyeska Pipeline Service Company (Alyeska) to verify compliance with state statutes and regulations, and their plans. Unit staff also worked closely with many public stakeholders along the TAPS route and in the Prince William Sound area that have an interest in the safe operation of the two facilities.

DEC/JPO Liaison

A DEC/Joint Pipeline Office (JPO) Liaison was hired to coordinate with the State Pipeline Coordinator's Section (SPCS) and JPO members. The State Right-of-Way Lease and the federal Grant of Right-of-Way for TAPS have multiple environmental and public health stipulations for which SPAR's CS Program and the department's Air Quality, Water, and Environmental Health Divisions have jurisdictional oversight. In order to minimize duplication of oversight and assist the SPCS and JPO in determining Alyeska's compliance with Lease and Grant stipulations, the DEC/JPO Liaison provides a link between department permit staff and JPO staff for non-oil spill prevention and response programs.

5.0 Major Matters by Region



5.1 Northern Area

5.1.1 PPR Major Matters - Northern Area

Lynden Truck Hazmat Rollover Richardson Highway, Spill No. 16309900801

On January 8, 2016, at approximately 12:00 p.m., a southbound Lynden tractor trailer hauling a chemical load left the roadway and tipped over onto its side. The trailer split and there was a white vapor cloud emanating from the trailer. The tractor trailer was carrying cargo consisting of two totes of nitric acid (67% concentration), 24 drums of solid sodium hydroxide, one tote of liquid sodium hydroxide solution, one tote of hypochlorite, and six totes of hydrochloric acid. The Fairbanks North Star Borough HAZMAT team was activated to safely assess the situation and perform offloading operations. National Response Corporation (NRC) Alaska, LLC and Restoration Science & Engineering, LLC (RSE) were activated to assist with cleanup. The emergency account of the Oil and Hazardous Substance Response Fund was accessed for the response and $25,000 was used.

Lynden tractor trailer on its side off Richardson Highway, the white cloud emanating from the ruptured trailer is likely water vapor produced from a chemical reaction, January 8, 2016 (Photo/NRC Alaska)

Based on a detailed field-screening, it was determined that the area of release was localized to the area where the trailer came to rest following the rollover. Restoration Science & Engineering developed and executed a work plan that involved slowly irrigating the area of the release with sodium hydroxide solution to neutralize the spilled acid in the soil, and then capping the area with clean fill until weather permitted for complete removal. Restoration Science & Engineering submitted a work plan for final site actions, which involved removing the neutralized soil and backfilling the area with clean fill. Site remediation actions have been completed and PPR issued a site closure letter on November 9, 2016.

Eielson Air Force Base Building 1300 Buckeye Release, Spill No. 16309908901

On March 29, 2016, at approximately 2:15PM, a fire alarm in Eielson Air Force Base's (EAFB) Building 1300 hangar was tripped by a malfunction, triggering the fire-suppression system to activate. This caused a high-expansion fire-fighting foam (Buckeye) release. During the release, the generator did not activate the fans used to "expand" the foam. Consequently, the Buckeye was released as a 2.2% solution mixed with water. Based on the remaining volume of the Buckeye tank, EAFB personnel were able to back-calculate that approximately 2,700 gallons of 2.2% Buckeye solution had been released to the hangar. An unknown amount of this solution overflowed out of a hangar doorway and into the adjacent parking lot. EAFB personnel responded by using a vacuum truck to remove liquids remaining in the hangar and absorbing foam puddles in the parking lot area. During a DEC site visit, puddles containing foam floating on the top were observed in the grassy area adjacent to the parking lot. EAFB was requested to perform analytical sampling from the soil to demonstrate presence or absence of perfluorooctanesulfonic (PFOS) acid from this release. Analytical sample results are pending at this time.

Puddles with foam on surface, located in the parking area adjacent to the Building 1300 hangar, March 30, 2016 (Photo/DEC-Kelley Tu)

Kiana AVEC Fuel Overfill

Kiana, a Northwest Arctic Borough (NWAB) rural community is situated above the Squirrel River approximately 235 air miles from Kotzebue. Kiana's bulk tank farm obtains fuel from inland barges through a river header pipe, which is distributed to tanks owned by the NWAB School District, Alaska Village Electric Cooperative (AVEC) and the City of Kiana. On December 17, 2015, AVEC was transferring No. 1 Arctic Diesel fuel from their bulk tanks through a common pipeline to intermediate tanks located at the power house. Multiple 6,500 gallon intermediate tanks are connected to the common distribution pipeline, and isolated from each other with engineering

controls that prevent cross-connection overflows during transfers. Cold weather conditions are suspected of causing problems to the engineering controls that were designed in the fuel distribution system. AVEC's technicians transferring fluids during negative 35° F temperatures followed a practice that allowed the system to transfer, but operated outside procedures established by the tank farm designers. All operators of the tank farm are reported to have defeated shut-in safety devices during cold weather to obtain fuel in their intermediate tanks. AVEC failed to walk down the other intermediate tanks during their transfer and failed to notice diesel fuel releasing from the 6,500 gallon double wall above ground storage tank (AST) owned by the City of Kiana. Approximately 2,400 gallons of the fuel overflowed from intermediate tank C-2 onto hard packed snow covered roads, beneath structures, and undisturbed snow beyond the roads.

Kiana city employees shoveling contaminated snow into sleds for disposal, December 10, 2015 (Photo/DEC- Wesley Gromley)

The Kiana City Administrator requested absorbent resources from the DEC Kotzebue conex. Local responders retained by the City and the AVEC technicians recovered 800 gallons of fuel within the first 24 hours. DEC responders assisted in delineating the spill site, recovering contaminated snow, providing guidance and technical assistance during the cold weather cleanup, and assisted with waste management tactics for melting and removing hydrocarbons from contaminated snow. Plans were prepared for breakup mitigation tactics, soil cleanup, waste management, and confirmation sampling. Almost 100 cubic yards of contaminated snow was loaded into large vertical storage tanks during the winter response. City responders scrubbed the contaminated snow melt water through a primary Absorbent W® - cellulose water filter and then through a secondary, granular activated carbon filter system before discharging into their public owned treatment works. Contaminated soil was removed from the impact area and transferred to a land farm site owned by the City. Analytical confirmation results were collected by an independent environmental professional late this summer, which were recently sent to the department. The land farm will be managed by the City of Kiana for five years, before an analytical assessment of the dissipation effectiveness.

Wales Norton Sound Health Corporation (NSHC) Clinic Release

Wales is a west coast community in an unorganized borough, approximately 110 miles northwest of Nome. The release occurred on May 12, 2016 during early breakup, when driving rain, thawing days, freezing nights, and surface water was beginning to puddle. Snow slid from the NSHC, Wales Clinic roof, shearing the fuel line of a 500 gallon above ground fuel storage tank. Approximately 300 gallons of Arctic Diesel fuel were released into drift-snow covered ground.

The DEC fold-a-tank was used to contain oil and contaminated snow during melting, May 29, 2016 (Photo/DEC- John Ebel)

Thousands of cubic yards of wet drift snow surrounded the clinic and complicated the delineation procedures. Heavy equipment was not available to assist with snow removal or provide containment tactics. The local NSHC maintenance representative was in Nome for training when the release occurred, which delayed response actions. Absorbent resources supplied by the school supported the initial response actions, before resources from the DEC Nome conex arrived. The DEC Nome conex supplied absorbent boom and pads, waste bags, contaminated snow storage cells, personal protective equipment, decontamination products and numerous other resources for local responders to contain and recover product.


Flush and recovery tactic implemented behind the clinic building. The grey hose in the foreground supplied water while the absorbent materials captured the mobile hydrocarbons brought up by the water deluge tactic, June 11, 2016 (Photo/DEC- Kelley Tu)

DEC representatives arrived in Wales several weeks after the release to coordinate plans and tactics with the interrelated local government and tribal representatives. Cultural significant objects and buried artifacts were discovered in the release area flow path, behind the clinic. The onsite DEC representatives stopped the development of an underflow dam tactic until a resolution of agreement with all stakeholders was developed for non-invasive community supported tactics. Plans were developed and NSHC brought in a response contractor from Nome, using local labor, to execute an

underflow dam tactic, with flush and recovery tactics that used absorbent products for recovery. DEC representatives met in July to receive back the resources obtained from the Nome conex.

Deering City Building Heating Oil Release

On April 13, 2016, the City of Deering reported that 500 gallons of diesel was released from a heating oil tank at the city building, the diesel ran beneath the city building. The release was the result of a cracked fuel line that ran under the city building. At the time of the release, snow as packed under the city building and a large snow drift extended from the backside of the building to Smith Creek, a distance of 150 feet. The snow drift was removed and confirmed that diesel remained beneath the building. All snow was removed from under the building and contaminated snow was placed in drums that were placed in secondary containment outside of town. On May 10, 2016, the community of Deering experienced flooding as a result of storm surge and an ice jam, the flooding impacted Smith Creek and the area behind the city building. No sheening occurred as a result of the remaining contamination under the city building. Plans are in place to remove as much of the contaminated material next field season.

BPXA GC2 Tank 7703

BP Exploration Alaska (BPXA) reported 4,872 gallons of crude oil was released from a tank at their Gathering Center 2 (GC2) facility into secondary containment on December 2, 2015. Tank 7703 was "original equipment" built for the produced water system of GC2; it was designed to manage water after oil, gas, and solids were recovered. The tank had dual purpose, which was for the "skimming" oil from produced water or to act as a surge tank during large water events. Over time production fluids processed through the facility gained more solids and additional tanks and technologies were added to the original process water train. Tank 7703 was modified around 2006 because the process transducer inside the tank failed to provide reliable level control of the fluids. Redundant pressure transmitters were fabricated outside the tank during a modification, which provided an automation control system that managed the fluid level in the tank. During cold weather the pressure transmitter system would become problematic and the redundant level control systems provided inconsistent readings and erroneous fluid levels. Control operators became "accustomed" to interpreting an "erroneous fluid level" because one of the redundant systems was usually off, compared to the other." The tank overflowed because the fluid level was not interpreted correctly by the operators and the fluid level was allowed to rise above a shutdown control point. The automation control system fabricated to maintain fluid levels in Tank 7703 failed to function as intended.

North Slope Flow Lines

There were no North Slope fields flow lines spills reported in FY16. Spill data indicated a mostly downward trending of the five-year moving average for flow line spills since 2006. This could be attributed to the increasing focus on pipeline integrity issues by plan holders since the 2006 major spill incidents, and our flow lines regulations. It is also noted that the flow line integrity program for the Prudhoe Bay Unit (PBU) was under the purview of a United States Department of Justice consent decree between 2011 and 2015. PPR Program representatives continue to meet with North Slope plan holders annually for an overview of their corrosion control programs.

New Plans, Renewals, and Major Amendments

In FY16, the North Slope/Outer Continental Shelf Unit (NS/OCSU) approved five contingency plans with an additional five plans submitted in FY16 which remained under review into FY17. Of note in FY16, the NS/OCSU reviewed and approved two new plans for the gas condensate production operations coming on line at Point Thomson, including one for ExxonMobil's Point Thomson Unit production and the other for the Point Thomson Export Pipeline. The unit approved the transfer of ownership of NordAq's North Slope exploration plan to Caelus Alaska Smith Bay. Two new exploration plans were reviewed and approved. The Caelus Natural Resources renewal plan for Oooguruk was submitted to additionally include new development at the Nuna Prospect. In FY16, the TAPS/IU approved three contingency plans, two transfer of ownership amendments and began the review of the TAPS contingency plan.

Charter for Development of the Alaskan North Slope

The Charter for Development of the Alaskan North Slope, signed December 2, 1999, is an agreement between the State of Alaska, BPXA, and ARCO (now ConocoPhillips) which led to State of Alaska support of a merger between BPXA and ARCO. The Charter contains 11 different environmental commitments which the department oversees. The environmental commitments in the Charter are ongoing for the life of the merger.

The NS/OCSU organized and participated in the annual corrosion management review and asset integrity meetings with BPXA and ConocoPhillips in Anchorage. DEC staff typically meet in the fall with BPXA and ConocoPhillips in an open forum to view and discuss presentations about their respective corrosion monitoring programs for North Slope facilities.

5.1.2 CS Major Matters - Northern Area

Eielson Air Force Base (AFB)

The CS Program continued its regulatory oversight and partnership with the U.S. Air Force and EPA to ensure proper management of contaminated sites at Eielson. During FY15, a significant perfluorinated compound (PFC) groundwater contaminant problem was discovered and determined to be migrating off-base and beneath the Moose Creek community. PFCs were a component of fire-fighting foams used to suppress petroleum fires at Eielson AFB and elsewhere. PFCs are emerging contaminants that are undergoing research to determine their adverse health and environmental risks. During FY16, CS staff provided oversight on drinking water system sampling at Eielson and throughout Moose Creek, coordinated with the Air Force, EPA and property owners to ensure people were informed on the issues, and worked with the Air Force to ensure clean drinking water was provided to effected residents and workers. To date drinking water has been sampled on Eielson AFB and at 174 off-base properties, several base wells and 169 off-site drinking water wells had PFC concentrations higher than the EPA health advisory levels, the Air Force immediately began providing bottled water to affected residents, and subsequently has provided 152 drinking water systems (holding tanks for delivered water or carbon filtration systems for on-site treatment). Bottled drinking water is being provided to other properties that had elevated PFC levels until

alternative drinking water systems are provided. CS staff coordinated with the DEC Drinking Water Program and the Air Force on establishing a temporary treatment system for the Eielson drinking water system and on plans for a larger scale permanent treatment system. Extensive community and agency coordination is continuing.

BP Resource Conservation and Recovery Act (RCRA) Administrative Order on Consent for North Slope Sites

Surface water sampling on the North Slope, 2015 (Photo/BP and ERM)

In 2007, BP entered into an Administrative Order by Consent (AOC) with the EPA under the RCRA. The AOC outlines requirements that must be met by BP as operator of the Prudhoe Bay Unit (PBU) facility, which is an on-shore oil and gas field on the North Slope of Alaska utilized for development and production of oil and gas. In FY16, CS reviewed and commented on site-specific documents, as well as documents applicable to the entire AOC, including the Site-Wide Conceptual Site Model (CSM) and Regulated Constituents of Potential Concern. Finalizing documents such as these requires a high level of CS expertise and extensive coordination by CS with EPA and BP, BP partners, BP consultants, as well as DEC's Solid Waste Program (SWP). CS met regularly with EPA, DEC SWP, Department of Natural Resources (DNR), as well as BP and their representatives to discuss project documents, landowner concerns, and to prioritize and plan future work at sites in the PBU; such as Tuboscope, Sand Dunes, Fire Training Grounds, and Pad-13.

Road Projects administered/funded by ADOT&PF, City of Fairbanks, and FMATS

During FY16, CS participated in road improvements and Right-of-Way utility upgrade projects in Fairbanks, by planning and coordinating with the Alaska Department of Transportation and Public Facilities (ADOT&PF), the City of Fairbanks, the Fairbanks Metropolitan Area Transportation System (FMATS), and various contractors and consultants. CS provided guidance on locations of former dry cleaners (sources of the hazardous chemical, perchloroethylene, a common dry cleaning chemical), as well as other known or suspected contaminated sites; reviewed contaminated soil sampling and management plans; and facilitated coordination with EPA for disposal of soil contaminated with hazardous chemicals. Specific projects during FY16 included the Rickert & Gateway Subdivisions Improvement Project, and the Fairbanks Area Building Demolition: Third Street Widening Project. The later project specifically included acquisitions of properties obtained by eminent domain by the State of Alaska, one of which contained a former dry cleaner.

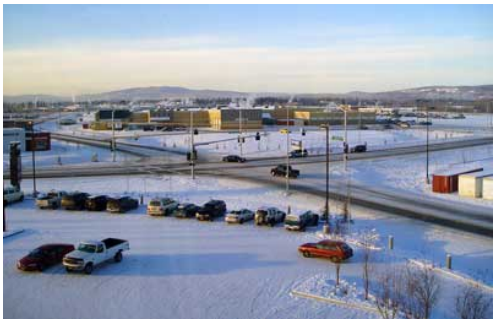
900-gallon UST excavation at former dry cleaner (left), sewer line excavated, cut, and plugged at former dry cleaner, June 24, 2015 (Photo/DEC)

North Pole Refinery

The sulfolane groundwater contamination originating from the North Pole Refinery continues to be one of the largest contaminated groundwater plumes in the State, impacting 500-600 homes in the greater North Pole area. To date, $5.9 million has been used from the emergency account of the Oil and Hazardous Substances Response Fund. Flint Hills Resources, Alaska continues to operate a groundwater treatment system to limit migration of sulfolane off the former refinery, and continues to provide alternate water to impacted residents.

Flint Hills Refinery in North Pole (Photo/DEC)

In FY16, DEC, Flint Hills, and the City of North Pole continued to explore ways to provide a permanent water supply solution, such as piped water. The National Toxicology Program is underway with a two-year study, which began in May 2015, to evaluate the effects of chronic exposure to sulfolane. The results from these studies can be used to help guide the development of an appropriate cleanup level.



Bentley Tax Lots in Fairbanks (Photo/DEC)

Former Bentley Tax Lots, Fairbanks

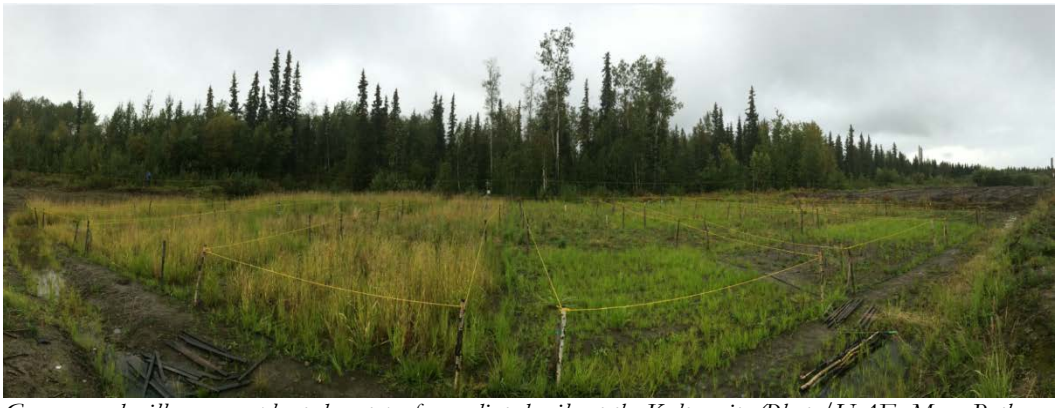
CS staff provided oversight of contaminated sites associated with former Bentley Trust lands in Fairbanks. Some of these sites were reopened for further assessment due to the cleanup levels being lowered and new concern over potential vapor intrusion risk in residential neighborhoods. In FY16, DEC worked with responsible parties to continue long-term groundwater monitoring and to assess the risk of vapor intrusion where buildings

exist overtop of contaminated groundwater. Many of the former Bentley Tax Lots have been redeveloped successfully for commercial retail businesses.

Phytoremediation of Petroleum contaminated soils, Kaltag

Soil treatment by phytoremediation and land farming continued in the Yukon River Community of Kaltag during FY16. DEC undertook a soil excavation cleanup in 2014, at the Kaltag School, established a land farm and phytoremediation plot to treat the soils. With the assistance of the UAF and community members, the land farm is being tilled during summer months, while UAF students and staff plant and monitor the phytoremediation plot, using native willow trees and grasses to cleanup the contaminated soil. This innovative and low-cost approach is allowing both treatment of contaminated soils and development of additional soil cleanup options for contaminated sites in rural communities impacted by petroleum releases.

Section of the road by Kaltag School (left) that was excavated and backfilled. Plot of contaminated soils (right) from the Kaltag School being treated by phytoremediation (Photo/DEC)



Grasses and willows were planted on top of remediated soils at the Kaltag site (Photo/UAF- Mary Beth Leigh)

Native Village of Venetie

In response to a DEC Brownfield Assessment and Cleanup Request from the Native Village of Venetie Tribal Government, DEC contracted with Shannon & Wilson, Inc. in October of 2015, to conduct a hazardous building materials survey on the former power plant and to assess petroleum spills on the surrounding property. Soil sample results documented diesel and residual range organics are present on the property with the highest concentrations located beneath the building. The hazardous building materials survey found materials containing asbestos, lead, polychlorinated

bi-phenyls, and mercury. Ozone-depleting refrigerants and fungal growth were also identified in the building. These materials will require special handling practices when the building is demolished.

Legacy Wells

The CS Program and BLM continue to coordinate on the assessment and cleanup of 137 Legacy Wells in the National Petroleum Reserve – Alaska (NPR-A) that were installed between 1944 and 1981.

Plugging of South Barrow Core #1, prior to welding cap, during 2016 field season (left) (Photo/Olgoonik Construction Services), Fish Creek No. 1 well operations during summer 1949 (right) (Photo/George Gryc)

Between February and April 2016, plugging and abandonment work, as well as large surface debris removal was completed at eleven wells in the Cape Simpson area. During the summer of 2016, soil sampling and the remaining surface debris was removed at the aforementioned wells. Additionally, soil sampling, surface debris removal, plugging and abandonment was completed at 3 wells in the Barrow area. CS reviewed and coordinated with the Bureau of Land Management on sampling work plans. Draft sampling reports are due winter 2016-17.

5.2 Central Area

5.2.1 PPR Major Matters - Central Area

Fisher's Fuel Palmer Off-Ramp Tanker Rollover

On September 4, 2015, Fisher's Fuel truck hauling a tanker trailer carrying 6,200 gallons of unleaded gasoline caught on fire when the tanker trailer became unhitched and rolled over. The driver of the truck was uninjured. Due to the fire, the exact amount spilled to the environment is unknown. On October 3, the Palmer off ramp was closed to excavate the contaminated soil. The cleanup of the contaminated area was completed on the same day and the road was repaired on October 4. During the cleanup, approximately 780 cubic yards of contaminated soil was excavated and transported off site.

Tanker trailer after fire was extinguished, September 4, 2015 (Photo/DEC- Mike Evans)

Adak Tugs Mecosta and Redwing

On December 12, 2015, a winter storm in Adak caused two tugs, containing diesel, oil, aqueous film forming foam (AFFF), and a number of batteries, to break free of their moorings in Sweeper Cove. The tugs were in immediate danger of sinking. A Unified Command was formed and determined that the responsible party and owner of the abandoned vessels, Mr. Jack Stewart, was not taking adequate action. The United States Coast Guard federalized the incident and hired a contractor to respond. The contractor removed 43,585 gallons of diesel, 1,680 gallons of oil, 490 gallons of PCB oil, 2,273 gallons of AFFF, and 34 batteries. The tugs were then moored to a rock jetty at Sweeper Cove. In April 2016, it was reported that the Redwing had sunk near the jetty. Sheen was observed intermittently. In May 2016, the Mecosta was listing and had a release of fluorescein dye. At the end of FY16, the Redwing remained where it had sunk (in trespass on State of Alaska submerged lands) and the Mecosta was afloat at the rock jetty.

Adak tug, the Mecosta listing near the rock jetty, June 3, 2016 (Photo/DEC- Bernie Nowicki)

Frosty Fuels Diesel Line Rupture Cold Bay

On November 3, 2015, it was reported that 100 gallons of diesel been released at flex hose piping adjacent to the City of Cold Bay dock. Frosty Fuels stopped the release, however cleanup was not initiated until Chadux arrived two days later. Fuel had already migrated around the City's dock structure and had infiltrated the coarse beach sediments. After initial response actions the department requested that Frosty Fuels provide a plan to characterize and address, to the extent possible, the deeper contamination on the beach and around the dock structure. On May 13, the department received a work plan which, after some negotiations, was approved on June 15, 2016.

Location of the release, adjacent to the city dock in Cold Bay, May 12, 2016 (Photo/DEC)

Crowley/Edison Chouest Transition Commences

APSC and the PWS shippers announced that they had entered into a contract with Edison Chouest Offshore (ECO) to provide marine services at the VMT beginning in 2018. ECO will assume the duties currently provided by Crowley Marine. The contract will provide TAPS trade escort and response services for PWS supporting the VMT and TAPS shipper's plans. ECO will be working with Crowley to afford personnel training and familiarization while transitioning into these duties over the next two years. The PWSU is monitoring the transition plan and overseeing its implementation to assure continued regulatory compliance and protection of the PWS. Prior to the final transition, amendments documenting the equipment and personnel needs will be submitted to the department for review. These amendments will be reviewed against the requirements of 18 AAC 75 article 4, which include review of adequacy and Best Available Technology (BAT). The amendments will be made available to for public review as a part of the process.

5.2.2 CS Major Matters - Central Area

Buckner Building- Whittier Alaska

The City of Whittier and Prince William Sound Economic Development District were awarded DEC Brownfield Services in FY16, for the purposes of conducting a structural assessment of the Buckner Building to evaluate its re-use potential. Previous awards were used to develop a Property Assessment and Cleanup Plan, which included a comprehensive Hazardous Building Materials

A study found it would be too costly to refurbish the Buckner Building (Photo/DEC)

survey. The results of the structural assessment indicate that the cost to refurbish or retrofit any or all of the 275,000-square foot building would exceed the cost of new construction; therefore, it is not economically feasible to rehabilitate the building for re-use. The report also indicated , the hazardous building materials identified previously should be abated as soon as possible before the building deteriorates further due to the poor structural integrity, making abatement work too dangerous to conduct.

Exxon *Valdez* Lingering Oil

The Exxon Valdez Oil Spill (EVOS) Trustee Council engaged the Division FY16, to review the existing data and activities conducted in Prince William Sound to evaluate the nature and extent of lingering oil that remains from the spill. SPAR issued a Cleanup Complete determination in 1992, following the initial spill cleanup efforts, however lingering oil remains at numerous locations in the subsurface of the intertidal zone and has not degraded to the extent predicted following the initial cleanup efforts. SPAR drafted a white paper that included a review of the remediation pilot study conducted to evaluate methods of reducing the amount of lingering oil, a review of similar spills worldwide, and recommendations for additional study. The white paper will be discussed at the EVOS Trustee Council meeting in November 2016.

Northwest Bay, Eleanor Island, February 19, 2014 (Photo/Exxon Valdez Oil Spill Trustee Council

Red Devil Mine

This historic mercury mine operated from 1933-1971. The property management reverted to the BLM when the mining claims were abandoned in the 1980s. BLM has been conducting characterization and interim actions at the site since the 1990s, but has recently completed a

complete site-wide characterization, risk assessment, and analysis of cleanup alternatives. During FY16, CS staff and the EPA, Alaska Department of Health and Social Services (HSS), DNR, and Alaska Department of Fish and Game (ADF&G) participated in cleanup alternative analysis and negotiations with BLM to ensure that the proposed remedy is protective of human health and the environment and follows State regulations. Staff also reviewed BLM's report about the potential risk metals in the Kuskokwim River sediments pose to people, fish, and other aquatic receptors.

Beatson Mine

Kennecott Copper Company operated a historic copper mine on Latouche Island in the early 1900s. In the 1970s, the property was sold to a private developer and subdivided for residential/recreational lots. In FY16, Rio Tinto, the successor to the mining company, and CS staff conducted a joint site inspection to identify areas of potential concern and scope site characterization activities. Staff approved Rio Tinto's site characterization work plan which is to be implemented in early FY17; contacted over 120 private landowners who have purchased lots at the former mining claims to explain the potential for contamination and the planned site characterization; and held an open house in Anchorage to meet with landowners.

Atka

In FY16, CS staff provided regulatory oversite of several major contaminated site cleanup efforts conducted by the U.S. Army Corps of Engineers (USACE) in Atka including work at the Atka Air Force Auxiliary Field and Atka Cape Kadugnak Formerly Used Defense Sites (FUDS). The USACE is undertaking a base-wide approach to identify and clean up contamination within the Atka Air Force Auxiliary Field. In 2015, a Phase I remedial investigation (RI) identified 1,126 potential environmental features of interest. Of these, 346 sites warranted additional investigation during the summer of 2016, as part of the Phase II RI effort. Over 1,800 direct push probes and 324 boreholes were installed and over 800 individual analytical soil samples were collected. The Phase II report will be submitted to DEC in spring 2017, followed by the Phase III RI work plan for execution in summer 2017. Additionally, site-wide Military Munitions Response Program work will begin in 2017.

Generator building concrete pad sampling and demolition at Cape Kadugnak FUDS (Photo/Bethel Services, Inc. – TLI Solutions, Inc. Joint Venture)

At Cape Kadugnak FUDS, the USACE removed and disposed of five downed radio towers, other structures, and associated debris. They conducted site characterization and removed abandoned fuel tanks, drums, transformers, lead acid batteries and much of the associated contaminated soil and

sediment. All work was completed with the exception of additional petroleum impacted soil which is addressed in a work plan addendum to be executed in spring 2017.

Also, in early 2016, the Aleutian Pribilof Islands Association (APIA) secured funding through the Native American Lands Environmental Mitigation Program (NALEMP) to conduct a petroleum contaminated soil and drum removal action at the Puganax Creek and the work plan has been approved by DEC. Implementation of the work plan has been delayed until the 2017 field season.

Amaknak FUDS (Dutch Harbor/Unalaska)

In FY16, the CS Program provided regulatory oversite of several USACE efforts underway at the Amaknak FUDS site in Dutch Harbor and Unalaska. Work completed in summer 2015 included the Rocky Point Pipeline and Transformer Removal Action. Tasks include the removal of nearly 3,000 linear feet of abandoned fuel pipelines, a valve house and concrete vault, and the in place closure of two transformer vaults. Ongoing semi-annual groundwater monitoring will continue in this area.

Cutting and removal of pipeline 214 (Photo/ Bristol Environmental Remediation Services, LLC.)

A limited hazardous waste removal action was conducted at nine sites on Amaknak and Unalaska Islands. Phase I (2015) included investigation activities at several USTs, an AST and a generator building. Phase II (2016) included removal activities at two sites where contamination above cleanup levels was detected. The report is presently under DEC review and all nine sites may qualify for closure.

Former Adak Naval Complex, Operable Unit B-2 (OUB-2)

In FY16, the CS Program provided regulatory oversight as the Navy and their contractors completed their fourth year of what will eventually be a 5-year Non-Time Critical Removal Action (NTCRA) at Operable Unit B-2 of the former Adak Naval Complex. The Navy, EPA, and CS staff have been working since 2000, to characterize and determine an appropriate remedy for Munitions and Explosives of Concern (MEC) contamination remaining on the northern end of Adak Island from WWII Training Ranges and more recent Cold War use of the facility. In 2013, the Navy began implementing the NTCRA at five Remedial Action Areas (RAAs) where MEC was determined to be present. By the end of 2014 three of the five RAA's have been completed. During the 2015 field season, the contractor began clearance of the two most heavily contaminated historic MEC disposal areas (Open Burn/Open Detonation ranges) using armored heavy equipment. Once excavated the spoils are manually processed to remove MEC and ensure spoils are safe for reuse as backfill at the

site. Between 2013 and 2016, over 6,500 explosive items have been removed from the five RAAs and disposed of by explosive detonation. Work in these area will continue through the 2017 field season, and an additional field season may be required to complete the work.

Armored long-reach excavators performing mass excavation of MEC disposal area. UXO technicians are visible in the foreground sorting excavation spoils (Photo/CB&I Federal Services)

Attu FUDS, Attu Island

In FY16, USACE performed a removal action on Attu Island. Initial efforts on Attu focused on an evaluation of historical data to break down the facility into discrete geographic AOI. Potential contaminant sources were identified for further investigation and removal within each AOI. United States Fish and Wildlife Service (USFWS) requested that USACE prioritize AOI #4 based on reports of birds becoming trapped in tar ponds resulting from 52 leaking above ground storage tanks (ASTs) containing tar. USACE determined that AOI #1 would also be a focus of this effort. AOI#1 consists of a burn pit with numerous 55-gallon drums and associated soil contamination. At AOI #4 the contractor removed all 52 AST's and excavated soil contaminated with heavy petroleum product. At AOI#1 the contractor excavated the burn pit and removed over 50 tons of 55-gallon drums. The contractor excavated approximately 10,000 tons of contaminated soil from the two AOI's for off-island disposal. During the deployment USACE staff performed reconnaissance and collected characterization samples at features of interest in the remaining AOI's to facilitate future removal actions on Attu.

Excavation of drums and contaminated soil at AO#1 (Photo Bristol Environmental)

5.3 Southeast Area

5.3.1 PPR Major Matters - Southeast Area

Jarvis Power Plant Diesel Tank 1

On August 15, 2015, DEC received a report of diesel washing ashore in Sitka Sound near Indian River. The source was not discovered until the next day when the City and Borough of Sitka (CBS) discovered fuel in the secondary containment area of the Jarvis Street diesel power facility and reported a leaking valve from the secondary containment area. The CBS estimated approximately 30,000 gallons of diesel fuel was released to the facility's secondary containment area (SCA)when a gasket on piping within the SCA failed. The valve on the secondary containment area failed, and approximately 2,500 gallons of diesel was released into the storm drain system which empties into Sitka Sound at the mouth of the Indian River. A Unified Command was established in Sitka and DEC sent over the SOSC and one responder for the initial response, and the DEC local response container in Sitka was accessed to provide containment boom and other response supplies to support the response. Over the next eight weeks, PPR managed the initial cleanup, while the site investigation found oil had been released from the SCA drain system and had contaminated the power plant property. The Jarvis power plant site was then transferred to the CS Program for further remediation.

Aggressive booming of the storm drain outfall during the Jarvis Power Plant diesel release, August 2015 (Photo/DEC- Bob Mattson)

Tug *Challenger* Sinking

On September 12, 2015, the wooden hulled tugboat *Challenger* sank at anchor in the Gastineau Channel across from Juneau, Alaska. PPR staff responded to the incident in a Unified Command with the USCG. The vessel had been built during WW II and had become a derelict vessle whose ownership was cloudy. The USCG Sector Juneau federalized the response and funded the initial emergency response during the autumn of 2015. As

Deconstruction of the Tug Challenger after sinking and subsequent raising, February 2016 (Photo/DEC)

built, the tug had a fuel capacity of 8,500 gallons and a lubrication oil capacity of 1,000 gallons, however, there was an unknown amount of fuel and oil on the tug that continued to sheen and discharge into the waterway. In January, 2016, Sector Juneau then received approval for and destruction of tugboat Challenger under the Federal Water Pollution Control Act (FWCPA), to minimize the discharge of the remaining fuel and other potentially hazardous materials into the waterway and nearby environmentally sensitive areas.. A Unified Command was again stood up with USCG and DEC for the removal project which began February 1, 2016, and ended March 10, 2016.

B Street Klawock 6317 Transformer Oil

Sometime during January 30-31, 2016, a group of individuals in Klawock, Alaska obtained 17 transformers from Alaska Power & Telephone (APT). The spill was caused when three individuals dumped the oil from the transformers they had acquired into a small stream and adjacent soil while trying to recover copper from the transformers. The spill was reported to the NRC on February 16, 2016 by one of the individuals concerned about health effects of their actions. On February 23, 2016, a DEC responder arrived on scene and collected soil samples to characterize the contamination and to coordinate the response with the City of Klawock, ADF&G and other local agencies.

DEC responder collecting soil samples at the site of the transformer oil dumping, February 23, 2016 (Photo/Klawock Fire Dept.)

The samples were sent to a laboratory and analyzed. The laboratory analysis revealed PCB levels far below the State of Alaska cleanup standard. The individuals directly involved in the dumping received medical care from HSS, Craig Public Health Center. PPR transferred the site to the CS Program and referred the case to the DEC Environmental Crimes Unit.

5.3.2 CS Major Matters - Southeast Area

Wrangell Junkyard, Wrangell

The City of Wrangell acquired the land through foreclosure and has removed the vehicles and other metal debris from the property, however, it did not have the financial or technical resources to conduct a hazardous waste cleanup on the site. Recent sampling under an EPA Targeted Brownfields Assessment documented extremely high lead concentrations in the surface soil. Frequent rainfall on solid lead metal shards and highly contaminated soil readily leached very high concentrations of lead into surrounding soil and surface water. The property is surrounded by residential housing and the adjacent inter and subtidal area is a popular shellfish harvest site that continued to receive off-site migration of lead dissolved in surface water.

Removal action includes battery parts mixed with the soil and drums of petroleum waste, 2016. (Photos/DEC- Bruce Wanstall)

Emergency Removal

Using $7.4 million from the emergency account of Oil and Hazardous Substances Response Fund, DEC initiated a removal at the Wrangell Junkyard in February 2016. Approximately 18,350 cubic yards of lead contaminated soil was excavated, treated and stabilized with ECOBOND®, and stockpiled at the Wrangell Junkyard. ECOBOND®, which neutralizes the solubility of lead and retains the lead within the soil matrix (i.e. lead will not leach from the soil), was applied to the lead contaminated soils contained in the stockpile. Fourteen containers of impacted debris separated from the soil were shipped to a hazardous waste landfill in Oregon. Although the treated soil no longer poses a threat to leach into nearby water sources, the treated soil still contains lead and is characterized as a non-hazardous polluted soil and must be disposed of in a permitted facility.

Soil stockpile at the Wrangell Junkyard site. The pile will be moved to an approved monofill, 2016 (Photo/DEC- Bruce Wanstall)

Monofill Repository

The logistics and cost to transport the treated soil to an appropriate solid waste facility in Washington became infeasible so construction of a monofill repository became the preferred option selected by the DEC. The purpose of the repository is to place and cap the treated soil within the inactive rock pit, thereby limiting contact between surface water and the treated soil and reducing the exposure of the treated soil to humans, wildlife and vegetation. The inactive rock pit is an ideal repository location, as the bedrock floor and existing site topography provide natural barriers to assist with the encapsulation and isolation of the treated soil.

View of the DEC preferred rock pit where a monofill repository could be constructed to hold soil from the Wrangell Junk Yard cleanup, 2016 (Photo/NRC Alaska)

Conceptually, the treated soil would be placed at the southern section of the rock pit, extending north from the southernmost vertical wall a distance of approximately 235 feet. The monofill is proposed to be approximately 38 feet high and designed to prevent ponding of water so it drains away from the monofill. Long-term maintenance and monitoring will include periodic inspections and the site will be maintained to prevent erosion in accordance with 18 AAC 60. DEC fully expects the EPA Emergency Removal Program to construct the repository.

Site inspection of the DNR rock pit that could be used as the final repository for treated soil from the Wrangell Junk Yard cleanup, 2016 (Photos/DEC- Sally Schlichting)

Haines Fuel Terminal

The Haines Fuel Terminal is a former bulk storage facility which operated from 1955-1971, as the starting point for moving military fuel from the deep water port of Haines to Fairbanks through the Haines-Fairbanks Pipeline. The soil and groundwater at the Terminal are contaminated with petroleum hydrocarbons from leaks and small spills over time. CS staff have been working with the

Army for several decades to address individual on-site sources and contamination migrating outside of the facility fence. Following up on the Army's FY15 site characterization work, during FY16, CS staff worked with the Army to finalize a risk assessment work plan and a pipeline removal work plan, close underground injection wells and identify data gaps from the previous year's investigation so the characterization can be completed. The community of Haines remains interested in the cleanup activities and CS staff participated in Restoration Advisory Board meetings and other outreach activities providing clear and accurate information to the public.

6.0 Program Highlights

6.1 Prevention, Preparedness and Response (PPR)

In FY16, the PPR Program became a reality versus an idea. On July 1, 2015, the Prevention, Preparedness, and response Program was officially formed. The newly formed program gave staff a chance to learn new roles and take on other duties not previously available to them. Despite the enormous training need, staff have risen to the occasion and throughout FY16, no work deadlines were missed or major projects delayed. The merger of the previous Industry Preparedness Program (IPP) and Prevention and Emergency Response Program (PERP) into the new PPR Program has resulted in easier transition for the regulated community and a more efficient program staff.

6.1.1 PPR Data Review

Performance Measures

To review the PPR program performance measures please visit the Office of Management and Budget website at **https://www.omb.alaska.gov/html/performance/details.html?p=245**

Charts, Graphs, Statistics

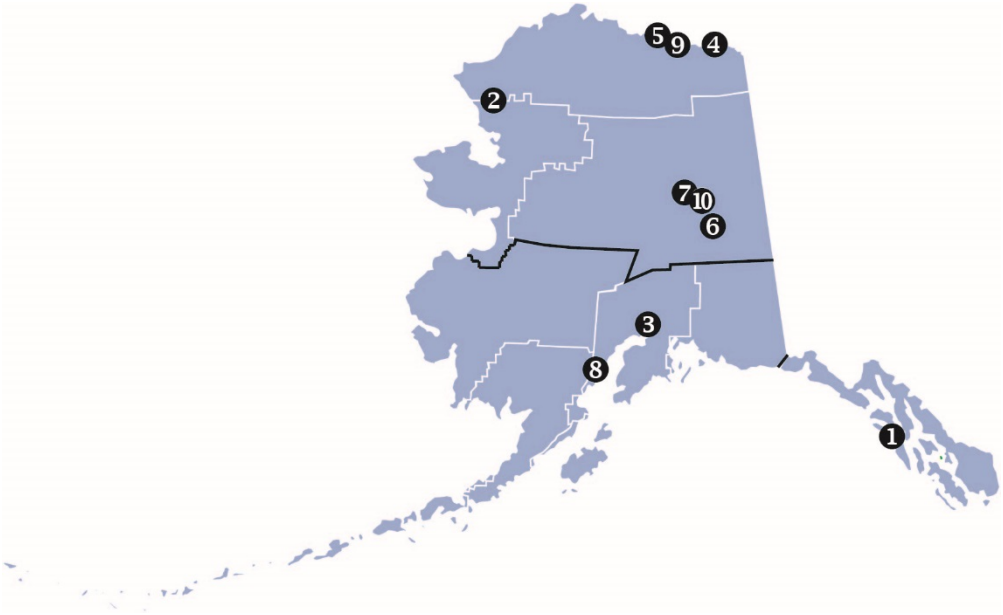
SPILL RESPONSE	Southeast	Central	Northern	TOTAL
Ledger Code Request	58	113	55	226
Response Fund Request	0	0	1	1
Settlements	1	0	1	2
Spills Reported	359	468	1036	1,863
Spills with Sitreps Generated	4	3	6	12
Total Sitreps Generated	13	6	10	29

SPILL RESPONSE SUMMARY	Southeast	Central	Northern	TOTAL
Field Visits	51	51	76	229
Phone Follow-up	181	226	231	864
Took Report	127	191	729	1238
Total Number of Spills	359	468	1036	1,863

SPILL CASELOAD SUMMARY	Southeast	Central	Northern	TOTAL
Cases Carried Over from FY15	18	184	96	298
FY16 Spills	359	468	1,036	1,863
Total Case Load	377	652	1,132	2,161
Cases Closed*	389	439	644	1,472

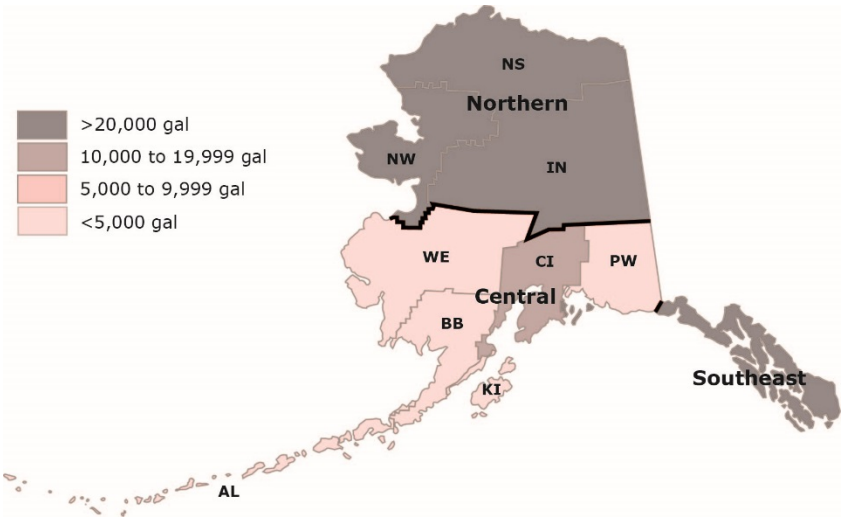
**Includes pre-FY16 cases closed during FY16; does not include cases transferred to the Contaminated Sites Program (CS)*

10 Largest Releases



MAP KEY	SPILL DATE	SPILL NAME	PRODUCT	GALLONS
1	08/15/15	Jarvis Power Plant Diesel Tank 1	Diesel	30,847
2	10/03/15	Red Dog Port Rd Zinc concentrate truck rollover	Zinc Concentrate	18,125
3	09/04/15	Fisher's Fuel Palmer Off-Ramp Tanker Rollover	Gasoline	6,200
4	09/11/15	Kaktovik Tank Farm ULSD overfill	Diesel	5,250
5	12/02/15	BPXA GC2 Tank-7703 4862-Gal Crude Release to secondary containment	Crude	4,862
6	01/29/16	Pogo Mine Paste Line #2 3500gal Paste Backfill	Other	3,500
7	11/23/15	Eielson North Dump Area 25,000lb JP-8 Jettison	Aviation Fuel	3,125
8	05/09/16	Hilcorp Trading Bay Produced Water Spill 5-9-2016	Produced Water	2,940
9	03/19/16	BPXA SIP-IMF2 32" Seawater Pipeline Release	Seawater	2,923
10	3/29/16	EAFB Bldg. 1300 200gal Buckeye/2,500gal Water	Other	2,700

Total Spill Volume by Subarea



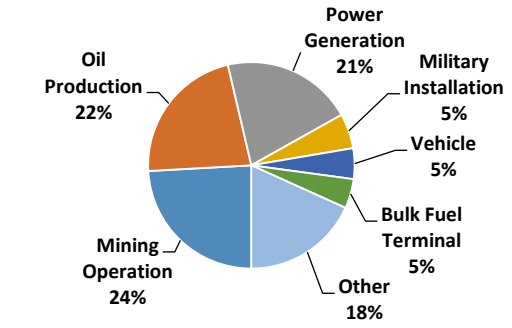
SUBAREA	GALLONS
Southeast Alaska	36,556
North Slope	34,604
Interior Alaska	28,267
Northwest Arctic	28,093
Cook Inlet	19,801
Western Alaska	3,574
Aleutians	2,391
Kodiak Island	1,209
Bristol Bay	457
Prince William Sound	427

All Products

Number of Spills Reported: 1,934*

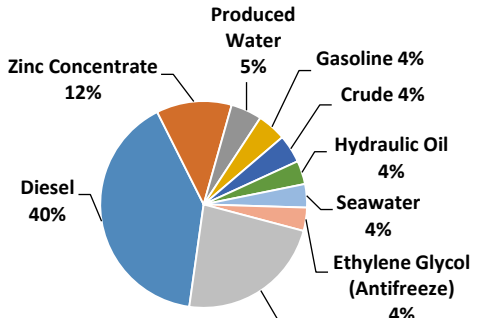
Total Gallons: 155,419

Volume Released by Facility Type



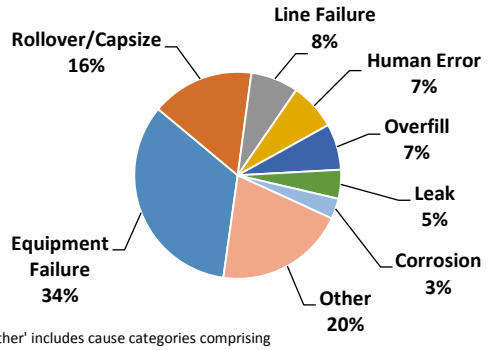
'Other' includes facility categories comprising 3% or less of the total volume released.

Volume Released by Product



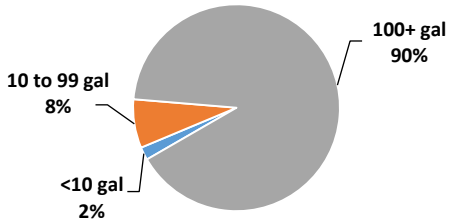
'Other' includes product categories comprising 3% or less of the total volume released.

Volume Released by Cause

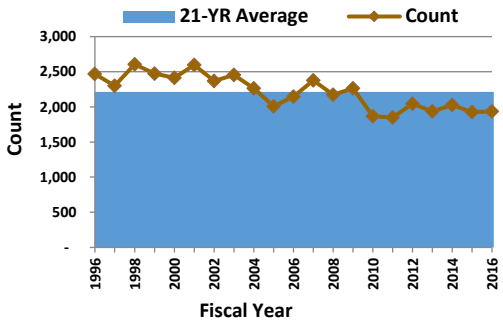


'Other' includes cause categories comprising 3% or less of the total volume released.

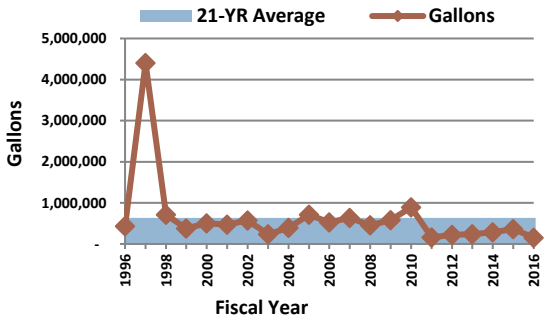
Volume Released by Size Class



Number of Spills by Fiscal Year



Total Volume by Fiscal Year**



**Some spill incidents involve releases of multiple substances. In FY16, there were 1,863 spill incidents. These incidents resulted in 1,934 oil and hazardous substance releases.*

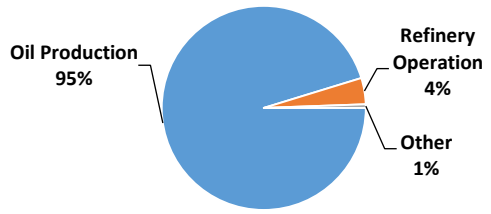
***Notes: 1/25/1997 (FY97) - a barge capsized and lost 25,000,000 pounds of Urea (Solid)*
3/17/1997 (FY97) - 995,400 gallons of seawater released at ARCO DS-14 in Prudhoe Bay

Crude Oil

Number of Spills Reported: 50

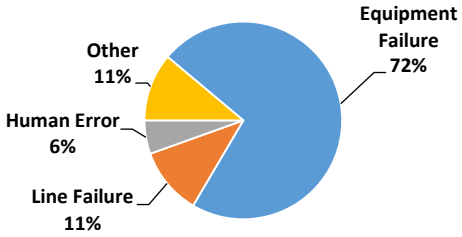
Total Gallons: 6,843

Volume Released by Facility Type



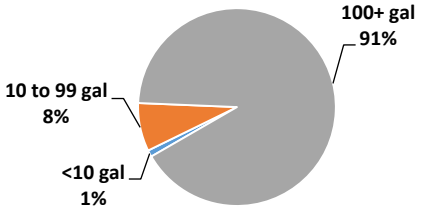
'Other' includes facility categories comprising 4% or less of the total volume released.

Volume Released by Cause

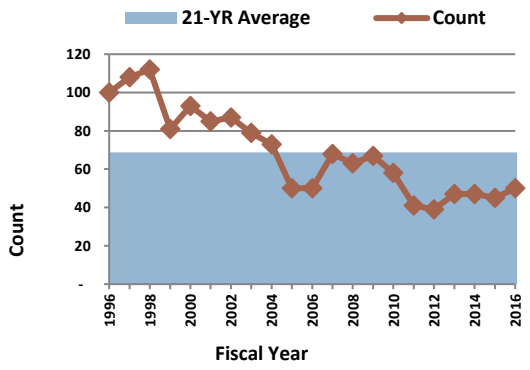


'Other' includes cause categories comprising 3% or less of the total volume released.

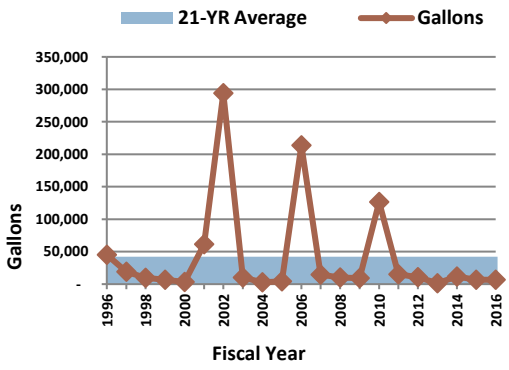
Volume Released by Size Class



Number of Spills by Fiscal Year



Total Volume by Fiscal Year*



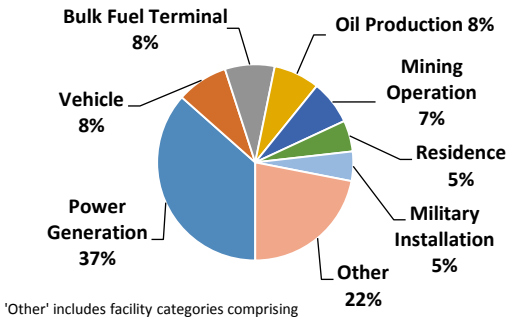
*Notes: *10/4/2001 (FY02) - TAPS Bullet Hole Release; 285,600 gallons crude oil*
3/2/2006 (FY06) - BP GC-2 Oil Transit Line Release; 212,252 gallons crude oil

Non-Crude Oil

Number of Spills Reported: 1,420

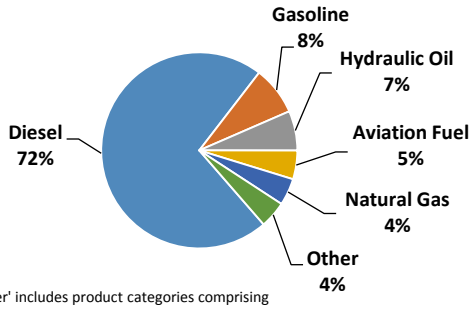
Total Gallons: 87,307

Volume Released by Facility Type



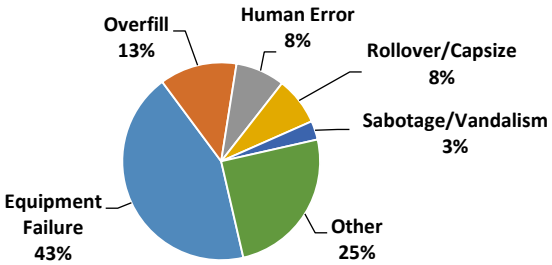
'Other' includes facility categories comprising 4% or less of the total volume released.

Volume Released by Product



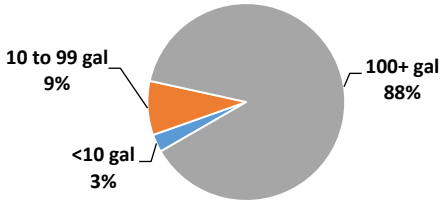
'Other' includes product categories comprising 2% or less of the total volume released.

Volume Released by Cause

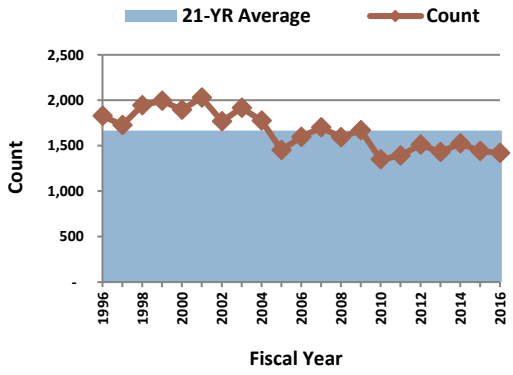


'Other' includes cause categories comprising 3% or less of the total volume released.

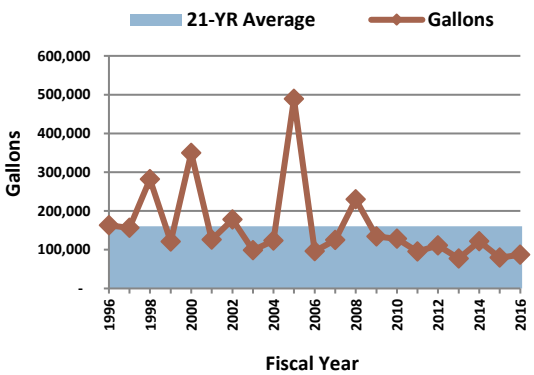
Volume Released by Size Class



Number of Spills by Fiscal Year



Total Volume by Fiscal Year*



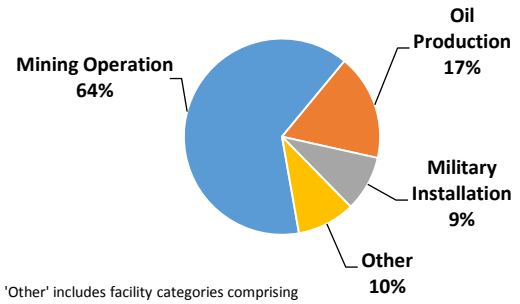
**Notes: 12/8/2004 (FY05) - the M/V Selendang Ayu broke apart, releasing 321,052 gallons of intermediate fuel oil 380 and 14,680 gallons of diesel*

Hazardous Substances

Number of Spills Reported: 415

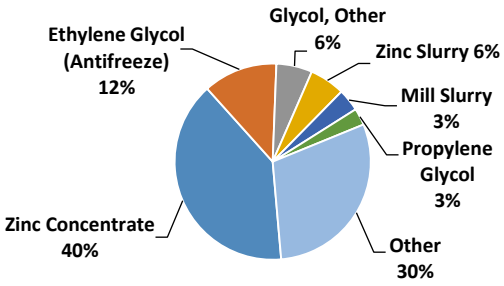
Total Gallons: 46,107

Volume Released by Facility Type



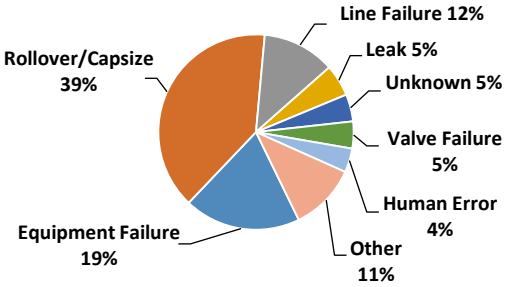
'Other' includes facility categories comprising 4% or less of the total volume released.

Volume Released by Product



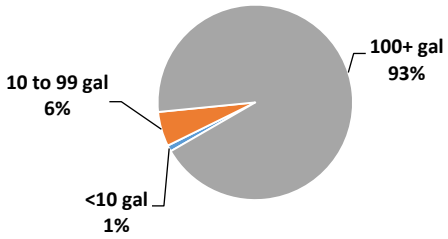
'Other' includes product categories comprising 2% or less of the total volume released.

Volume Released by Cause

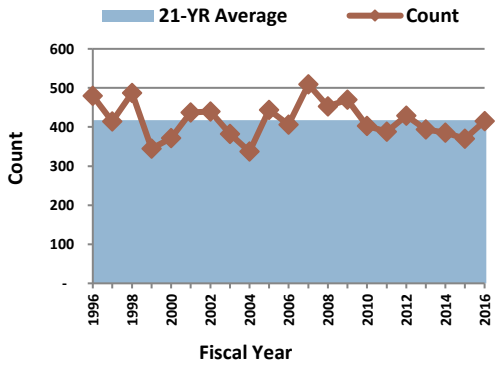


'Other' includes cause categories comprising 3% or less of the total volume released.

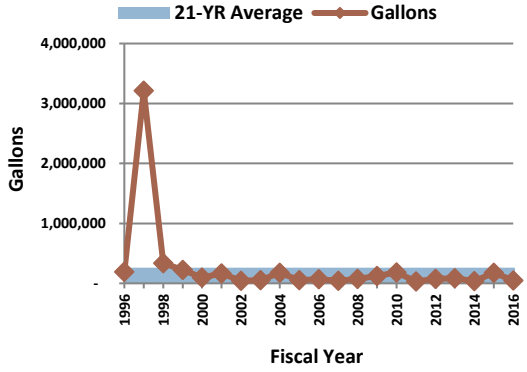
Volume Released by Size Class



Number of Spills by Fiscal Year



Total Volume by Fiscal Year*



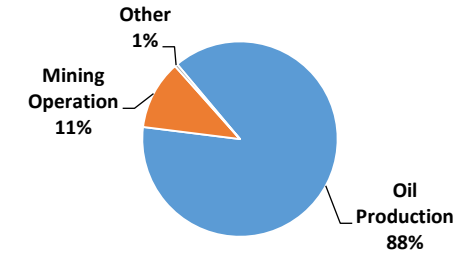
**Notes: 1/25/1997 (FY97) - a barge capsized and lost 25,000,000 pounds of Urea (Solid)*

Process Water

Number of Spills Reported: 49

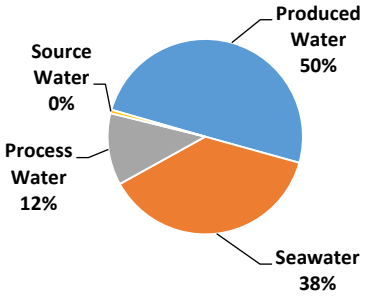
Total Gallons: 15,122

Volume Released by Facility Type

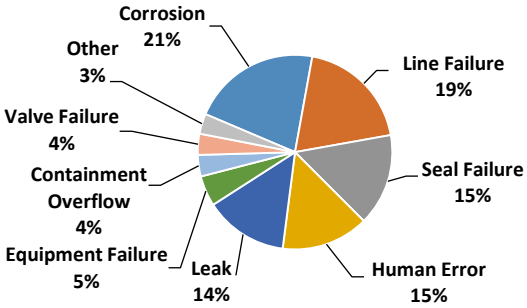


'Other' includes facility categories comprising 2% or less of the total volume released.

Volume Released by Product

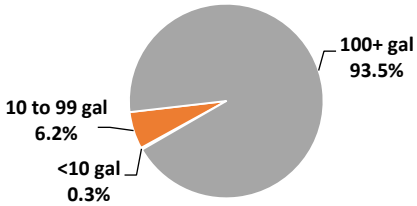


Volume Released by Cause

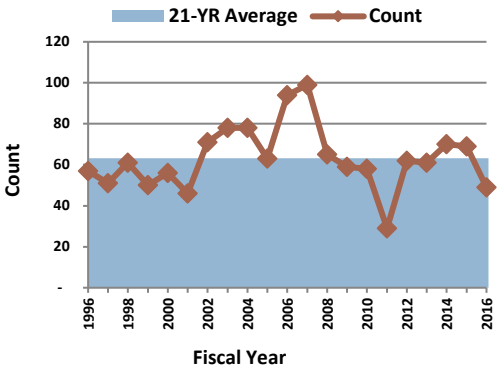


'Other' includes cause categories comprising 3% or less of the total volume released.

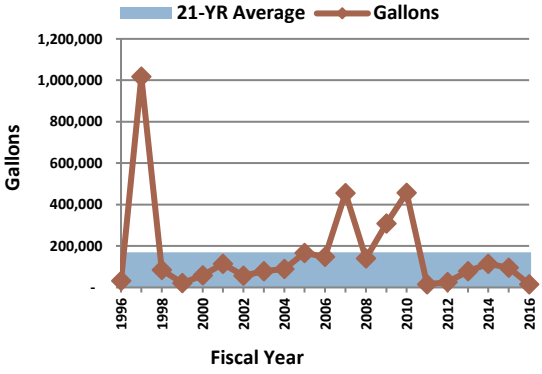
Volume Released by Size Class



Number of Spills by Fiscal Year



Total Volume by Fiscal Year*



**Notes: 3/17/1997 (FY97) - 995,400 gallons of seawater released at ARCO DS-14 in Prudhoe Bay*

Disclaimer: The data presented and summarized in these charts is provisional due to ongoing quality assurance/quality control by data entry staff and primary users. Ongoing reviews will further refine the accuracy of the data.

Notes: Some spill incidents involve releases of multiple substances. In FY16, there were 1,863 spill incidents. These incidents resulted in 1,934 oil and hazardous substance releases.

Some releases (such as gases and solids) are reported in pounds rather than gallons. For graphing purposes, spill quantities reported in pounds were converted to gallons using a conversion factor of eight pounds per gallon.

6.1.2 PPR Accomplishments

New Guidance and Regulations

The Guidance and Regulations Group worked on multiple guidance and regulations projects in FY16. The major guidance projects completed: Plan Review Job Aid, Article 4 checklists and job aids, and multiple FAQs for PPR Program staff. A common location on SharePoint for guidance and regulations was developed and implemented. Fifteen letter templates were drafted for the plan review process and will be finalized at the beginning of FY17.

The Article 4 revision package was adopted and became effective during FY16. The main amendments were to the application and review procedures, including the submittal of documents electronically. As part of the implementation plan, an internal training was provided to PPR staff and a webinar was provided to interested parties to highlight the changes as well as procedures for submitting plan documents electronically.

Financial Responsibility regulations for self-insurance were adopted and became effective during FY16, with the primary focus of the amendments relating to how to calculate working capital.

Prevention and Response Enforcement Actions

ENFORCEMENT ACTION	Southeast	Central	Northern	TOTAL
Formal Attorney General or Environmental Crimes Unit Referrals	3	3	4	10
Notice of Violation	0	1	1	2

Financial Responsibility (FR) Enforcement Actions

NOVs - 3
Referrals to Department of Law (LAW) - 2
UST FR Compliance Letters - 70
UST FR Cease & Desist Referrals to UST Unit - 4

In FY16, DEC continued to negotiate the Compliance Order By Consent (COBC) for the Crowley Petroleum Distribution (CPD) facility 2014 Notice of Violation (14-0018-40-0001).

In FY16, DEC received Aleut Enterprise LLC final submission of the Adak Petroleum (Adak) monthly facility inspection documents, required under the terms in section V 12.b.iii of the January 2015 COBC. The department determined Aleut has fully complied with the documentation deliverable terms and any further action on Aleut's part to provide additional facility reports was considered concluded. However, annual facility inspection at the Adak Petroleum terminal will continue through January 2020, to fulfill the final provision of the COBC.

Dayville Road Oil Change

In FY16, the PPR/Prince William Sound Unit staff responded to a report of spilled oil on a side road off of Dayville Road, Valdez. Responders found a large pool of oil, several empty motor oil containers, and other refuse that appeared to be the remains of someone changing their oil in a parking area. Department staff cleaned up the spilled oil and began an investigation. Evidence collected at the site lead to a suspect and the case was turned over to the DEC ECU. In September of 2016, the case was prosecuted and the violator plead guilty to the illegal disposal of oil and fined.

Litter and oiled surface water impacted by illegally discharged crankcase oil near Dayville Road Valdez, October 22, 2015 (Photo/DEC)

VMT Secondary Containment COBC

On August 28, 2014, DEC and Alyeska Pipeline Service Co., Inc. entered into a COBC for a multi-year project to repair and replace crude oil secondary containment piping at the East Tank Farm in the VMT. Alyeska successfully completed the repairs to three of the cells in 2015, an additional two containment cells were successfully repaired during FY16, with the remaining cells scheduled to be addressed during the 2017 construction season. The entire project is required to be completed by December 31, 2017.

On May 5, 2016 PPR issued a Notice of Violation (NOV) to the City of Galena. The NOV was issued to address five specific concerns: Failure to Maintain Tank #3 consistent with the requirements of 18 AAC 75.065(a)(1); Failure to comply with performance and recordkeeping of Oil and Discharge and Contingency stipulated facility inspections; Failure to perform an annual cathodic protection survey of Airport Complex Tank 44; Failure to maintain the cathodic protection system on the Airport Complex 8-inch pipeline; Failure to have an adequate leak detection or spill prevention system for Tanks 3 & 4. The TAPS/Interior Unit has been working with Integrity and Engineering Unit and the City of Galena to bring the facility into compliance.

UST Enforcement FY16

- DEC initiated mandatory Compliance Order proceedings against the Army for UST compliance issues at a former gas station located on Fort Wainwright. Concerns included failure to report a release, failure to permanently close a UST system within 12 months after temporary closure, and failure to conduct a release investigation and corrective action. Subsequently a Compliance Order by Consent (COBC) was negotiated and signed by the Army and DEC, establishing a schedule for removing the UST system, conducting a release investigation and corrective action, and payment of a civil assessment. The USTs have since been removed, the release investigation conducted, and corrective action plans are being developed.

- Aniak Transportation Services in Aniak, Alaska was issued an NOV on November 5, 2015, for failure to inspect a regulated UST every three years, for failure to maintain proper tank and piping release detection, and for failure to maintain financial responsibility. A prohibition to operate the tank was issued and is still in effect.

- A total of 16 facilities comprising 28 individual USTs were placed on delivery prohibition for various lengths of time and reasons. The most common reasons were for failure to inspect a tank every three years and failure to maintain financial responsibility. All but two of the tanks have returned to compliance and the prohibition lifted.

Inspections and Exercises

REGION	EXERCISE	INSPECTION
North	9	18
Central	21	6
Southeast	5	8
Total	35	32

Notable Spill Response Exercises

Industry-led exercises were conducted by the Alaska Railroad, Cook Inlet Energy, and BlueCrest. An unannounced drill was conducted with the Cook Inlet Pipeline Company to assess the initial response capability to a worst-case scenario at the Drift River Terminal facility.

The NS/OCSU conducted a multiday inspection at BPXA's vast Greater Prudhoe Bay production facility. Staff also coordinated with Integrity and Engineering Unit (IEU) in doing four intensive flow line inspections at BPXA and ConocoPhillips facilities. The Unit performed either an on-site inspection or an exercise at the three new exploration facilities, including Smith Bay. Although exploration drilling in the Outer Continental Shelf (OCS) does not require a state-approved contingency plan, DEC participated in the Bureau of Safety and Environmental Enforcement (BSEE)'s response equipment inspection and unannounced exercise for Shell's federal Chukchi Sea oil spill response plan (OSRP).

The TAPS/IU participated in industry lead exercises as well as one government initiated exercise. The TAPS/Interior Unit also completed three training audits of APSC. Inspections were completed as well as multiple site visits to introduce new plan reviewers to various facilities.

The PWSU worked with unit plan holders to implement an improved response exercise program to realize greater value and improve response readiness for regulated operators, response agencies, and the greater response community. These efforts were designed to improve response effectiveness by making the exercises as realistic as possible to afford learning and training opportunities for operators. The strategy was tested during the Shoreside Petroleum exercise in Cordova and during the VMT spring response exercise. Plan holders were encouraged to develop planning scenarios depicting an occurrence of a realistic situation relevant to their facility, to demonstrate their ability to achieve state planning standards. This interface with the facility and state shows great promise, allowing the operator to take a more active role in contingency plan development and implementation, and better protect the environment.

Financial Responsibility (FR) and Primary Response Action Contractor (PRAC) Applications

Industry Contingency Plan Holder FR Certificates - 319
UST FR Certificates - 385
NTV FR Certificates - 498
PRAC Registrations New & Renewals - 7

Non Tank Vessel (NTV) Plans

New plans approved - 104
Plans renewed - 23
Plan amendments approved - 79
Plans reinstated - 29
Plans suspended - 127
Plans terminated - 164

Natural Gas Exemptions

DEC staff provided technical advice and oversight regarding transition of Furie's KLU #3 well in Cook Inlet as a regulated exploration well to natural gas production.

Four natural gas exemptions were issued in FY16, as listed below.

- Furie Operating Alaska, LLC Kitchen Lights Unit No. 3 exemption issued April 7, 2016
- Furie Operating Alaska, LLC Kitchen Lights Unit No. A-1 and A-2 exemption issued July 28, 2016

6.1.3 PPR FY17 Program Priorities

Program Transition

The PPR Program is now one year into the restructuring process, with some work still to do. Training has been a large part of the last years work with staff learning new duties, and taking on

more work. In spite of so many hurdles in front of the program restructure, the PPR program has succeeded so far with no milestones being missed in FY16. Below are the FY17 priorities for the PPR Program. Our biggest emphasis will still be on training and putting together a master training plan for the entire program.

Training

With the creation of PPR, training has been revitalized to support staff taking on new responsibilities and job tasks. During FY16, a series of "101" training courses were developed for spill response, facility inspection and plan review. Creation and implementation of more transition related and standard trainings continued into FY16, with a total of 22 internal trainings provided to PPR staff.

Long-Term Master Training Framework

An FY16 priority was to develop a long-term master training framework for all PPR staff that addresses plan review, response, technical expertise, and specific readiness to support State roles in long-term Incident Management Team roles for significant spill response events. A draft Master Training Table was developed to establish a list of core trainings and the priority for those trainings for use by PPR supervisors and their staff. The table will be distributed to staff in FY17. The Master Training Table is an initial step in the development of a more in depth and all-encompassing long term master training framework for PPR. Work on the long-term master training framework will continue in FY17.

Exercise Lessons Learned

The Training and Exercise Group collected lessons learned data for exercises in which PPR program staff participated. The intent of the project is to share knowledge to improve response readiness statewide. For FY17, The Training and Exercise Group will continue to collect exercise lessons learned, analyze them, and share the results with PPR staff. The top priority lessons learned will be shared with the response community via PPRs website.

Response Exercise Program

In an effort to improve our service, we are redesigning our response exercise program. Response exercises represent an important part of our regulatory program by allowing us to verify a company's ability to adequately respond to a spill. The Division has been tasked with considering improvements to this tool so that we are being as efficient as possible and obtaining maximum benefits from these endeavors. In February 2016, we released a draft Response Exercise. White paper for the purpose of soliciting input on improving the program. Approximately 275 comments were received from stakeholders on the draft white paper. One of the major issues identified was the need for a collaborative approach to facilitate further discussions on ways the program can be improved. A draft project request for proposal (PRFP) was developed in FY16, and will be issued to SPAR's Spill Response Technical Support and Planning Term Contractors in FY17. The PRFP will be to conduct small focus group meetings and a large facilitated meeting on improvements to our Response Exercise Program. The project is expected to be concluded in FY17.

Guidance and Regulations Projects

Packages were drafted for: an increase to UST worker and inspector fees, incorporation of the federal updates to UST regulations into Chapter 78, and a housekeeping package to clarify and align language within and between Chapters 75 and 78. These packages are expected to go out for public comment in FY17.

Planning and research continued for new regulations for Class 2 facilities (formerly referred to as Medium Size Tank Farms) and will continue in FY17. The first phase of this project, registration requirements, is expected to be out for public comment in FY17.

Geographic Response Strategies (GRS)

Many entities throughout the state deploy GRSs during drills or responses. Having a meaningful way to capture and compile lessons learned is critical for improvement of the strategies overtime. During FY16, PPR will complete the development of a State GRS assessment procedure including a comment process for capturing deficiencies identified during field deployments and a streamlined process for finalizing non-substantive changes. Verifying GRS during drills and exercises is important to keep the strategies current. Building GRS into subarea plans is also helpful so that individual companies do not have to maintain these regional approaches within their response plans.

6.2 Contaminated Sites (CS)

6.2.1 CS Data Review

More than 7,400 contaminated properties in Alaska have been documented since program inception. Of the total number of sites placed on the contaminated sites database over approximately 35 years, about 70% have been closed.

As of June 30, 2016, there were 2,261 open sites listed on the contaminated sites database. Even though 1,335 sites have been added to the contaminated sites database over the last 10 years, the overall number of active sites in our inventory has decreased from 2,802 in 2006 by approximately 28%.

Chart 1: Cumulative Open and Closed Sites

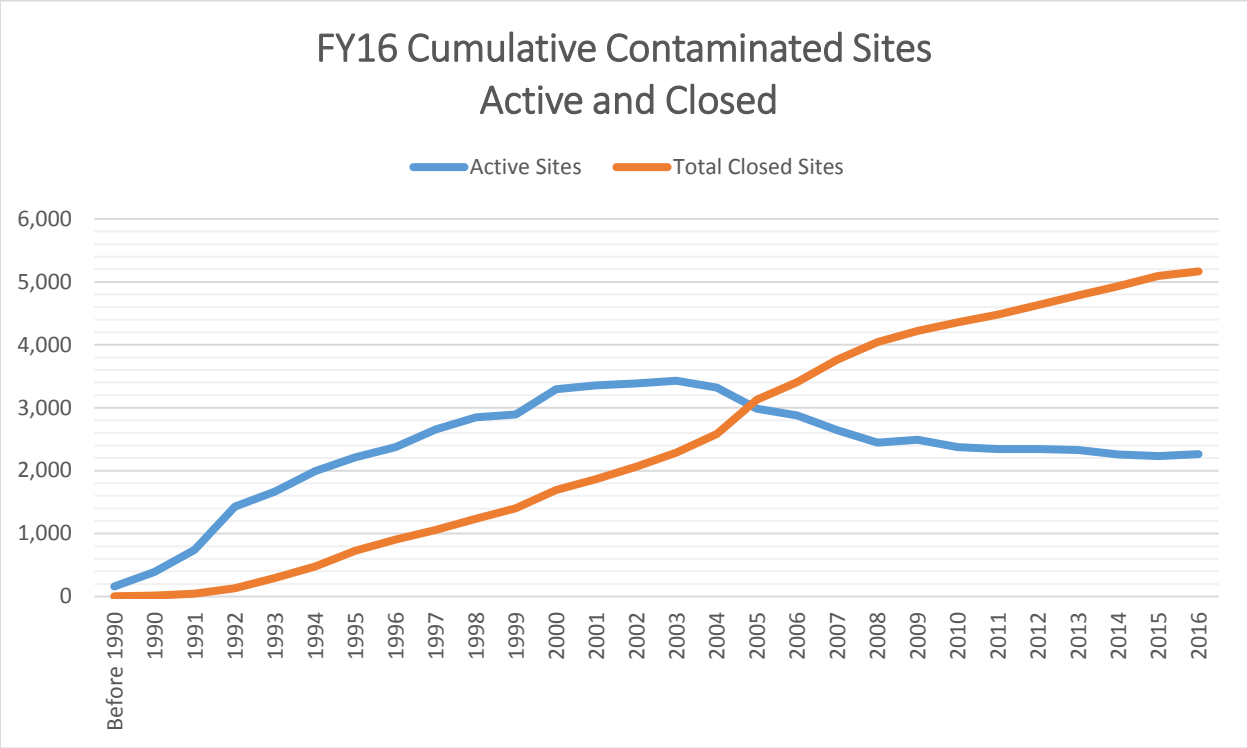


Chart 1 depicts the open and closed sites trend since 1990. The milestone year was 2005, when the number of closed sites initially exceeded the number of open sites. The gap has widened steadily since 2005, indicating measurable progress and improvement in methods for accomplishing risk reduction at the thousands of legacy contaminated properties in Alaska.

By the close of FY16, the program made progress toward but did not meet its performance measure goals of demonstrated annual progress on 100% of high priority contaminated sites posing the greatest risk to human health and the environment and completing 150 total site closures. However, total closures for leaking underground storage tanks (LUST) – a federal performance measure set

annually at 10% of the total inventory of open LUST sites at the beginning of the fiscal year – were achieved.

Performance Measure	Goal	Number Achieved in FY16
Total Site Closures	150	102
Measureable progress on 100% High Priority Sites	583	472
LUST Closures	34	38

About 31% of the closures were issued with institutional controls in FY16, down from 45% in FY15. Although about 77% of the 5,166 total closed sites (as of June 30, 2016) are without any land use restrictions (no institutional controls), the use of institutional control tools to manage inaccessible or recalcitrant contamination at sites is expected to increase. Institutional controls allow properties to return to safe and beneficial reuse, as well as to be sold and transferred, provided that property owners agree to ensure these controls are maintained over the long term. This approach helps support development goals and the economic health in Alaska's communities.

Progress on mitigating risks at high priority sites

The Contaminated Sites Program evaluates relative site risk by using a tool called the Exposure Tracking Model (ETM). The model summarizes the location of contamination, what environmental media (such as soil or groundwater) are impacted, and how the contamination may potentially reach humans or ecological receptors (exposure pathways). A site's ETM ranking has direct bearing on the priority of the site. Sites with complete exposure pathways for human and ecological risk will be elevated in priority. The CS Program's mission is to focus its resources on the contaminated sites with the highest risks. By tracking annual progress on high priority sites, the CS Program ensures these sites do not languish; the highest risks to human health and the environment are addressed and controlled; and responsible parties for these sites are held accountable.

Chart 2: Progress on Sites with High Priority

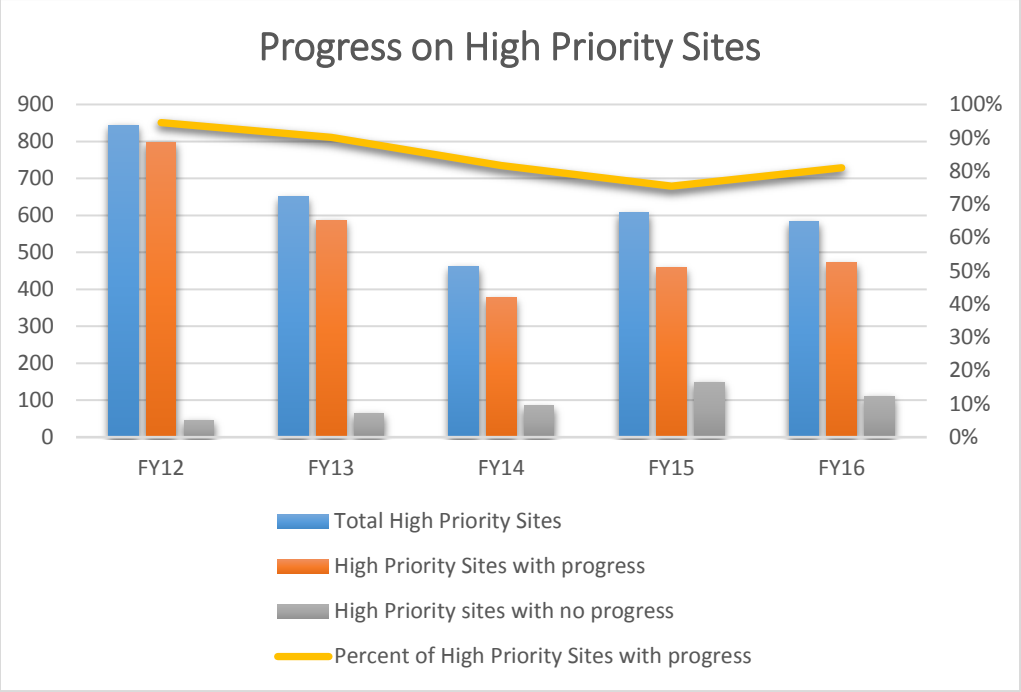


Chart 2 depicts the number of high priority sites over the past five years, and those which had measureable forward progress to address site risks.

Chart 3: Annual Count of Sites Restored

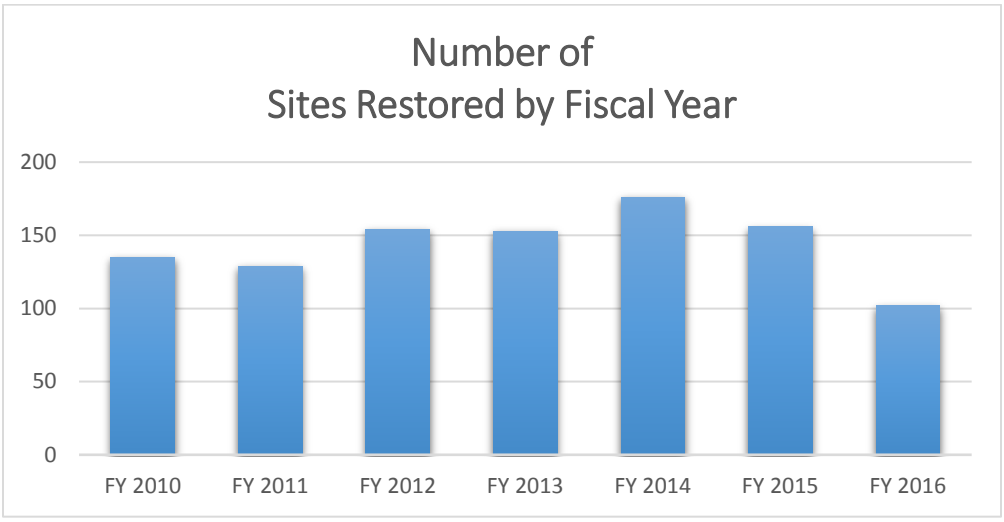


Chart 3 depicts the site closure trend over the past seven years. Shifting our focus away from addressing stalled and medium and lower priority sites and towards high risk, high priority sites has resulted in a decline in the number of closures this past year. This reflects the greater complexity and other challenges associated with mitigating risks at high priority sites, where closure is not easily achieved.

A total of 140 sites were added to the contaminated sites database in FY16, including 33 sites transferred from PERP. Of the added sites, 19 were closed during the fiscal year, and 20 were found to be either unconfirmed, non-qualifying (as defined by the CS database inclusion criteria), or informational. Of all new sites, 97 remained in active status as of June 30, 2016.

Chart 4: Age Distribution of Active Sites

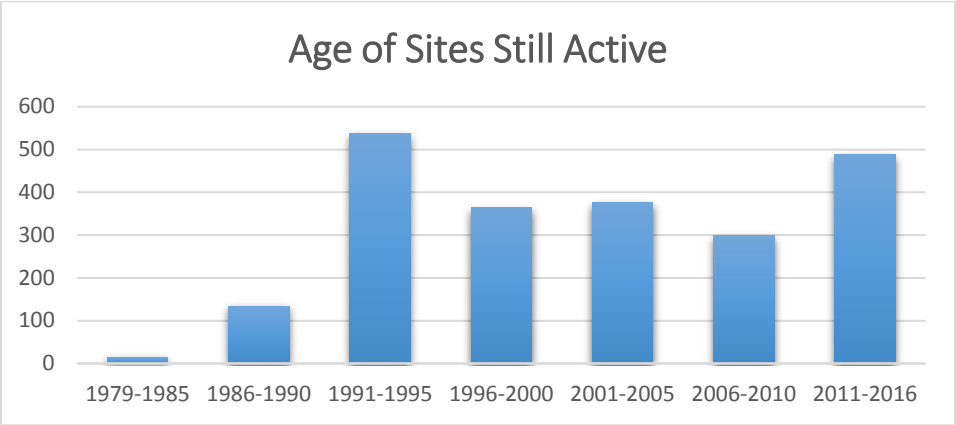


Chart 4 shows the age distribution of sites currently active in the CS inventory, by showing the timeframe during which the site was added.

Chart 5: Age Distribution of Sites Closed in FY16

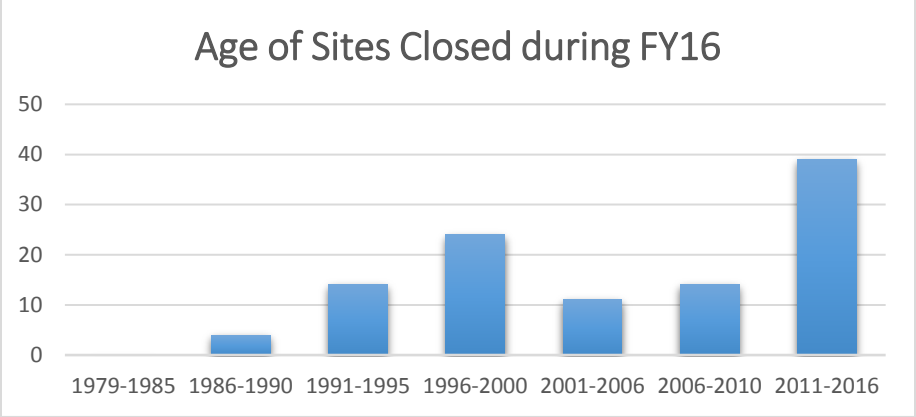


Chart 5 illustrates how long sites had been in our inventory that were closed during FY16. It is worth noting that about 40% of the sites closed during the fiscal year were added to the database between 16-30 years ago. This statistic is an indicator of both the time it takes to remediate some sites as well as the program's concerted effort in recent years to address stalled and languishing sites. Nevertheless, much work remains. As shown in Chart 4 above, 537 sites added to the program inventory between 1991 and 1995 still remain open and active.

Military installations, bulk fuel storage and gas stations, oil exploration and refining, aviation, and maintenance facilities, are the five most common types of open contaminated sites. Chart 3 shows

active sites by type. Military installations are the largest category, comprising close to one-third of the 2231 open sites at the end of FY15.

Federal military and federal civilian agencies are responsible for over half the remaining open sites as of the end of FY16. About one-third of open sites are in private ownership, while state and local government open sites combined are less than one-fifth.

Chart 6: Number of Active Sites by Category

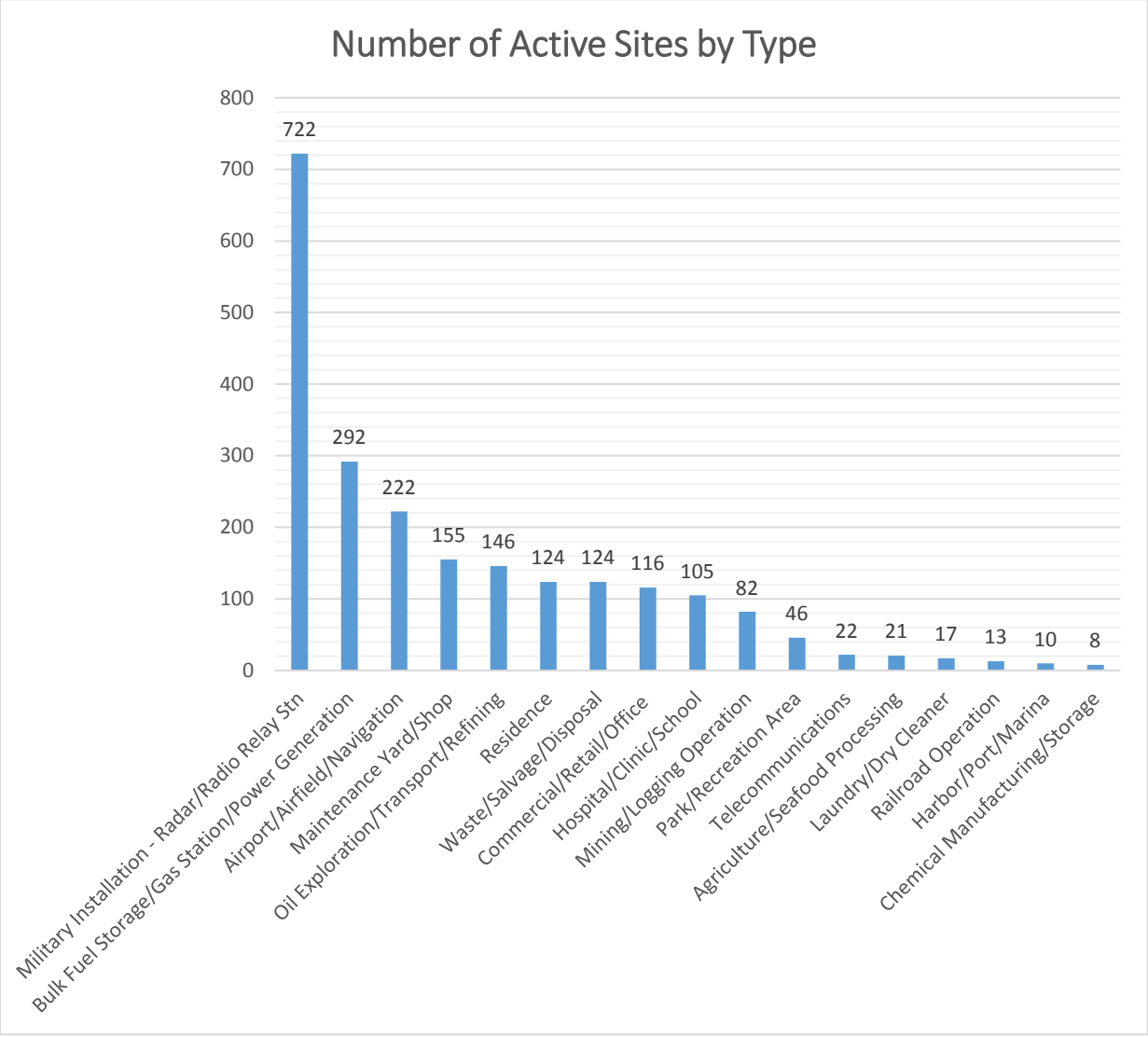


Chart 6 displays the breakdown of active sites by the class of contaminant. The majority of active sites are from releases of petroleum products. Some of these sites have additional contaminants, including volatile and semi-volatile compounds and other contaminants.

Figure 1: Map of all active contaminated sites in the State of Alaska

By area, slightly more than half of the open sites are located in South Central Alaska; 40% in the Interior and North Slope; and less than 10% in Southeast.

Chart 7: Active Sites by Contaminant Class

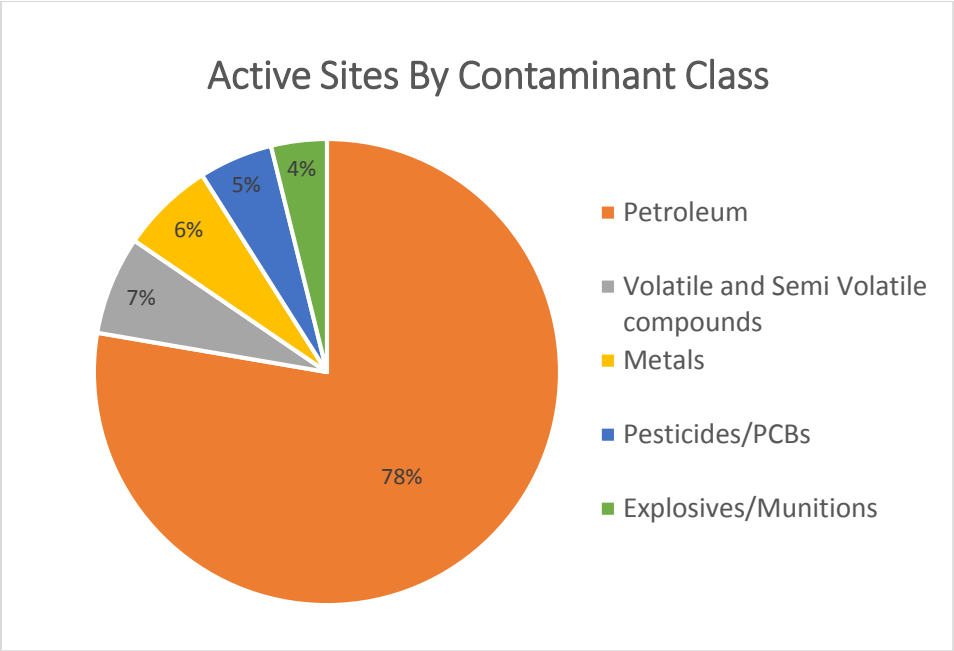
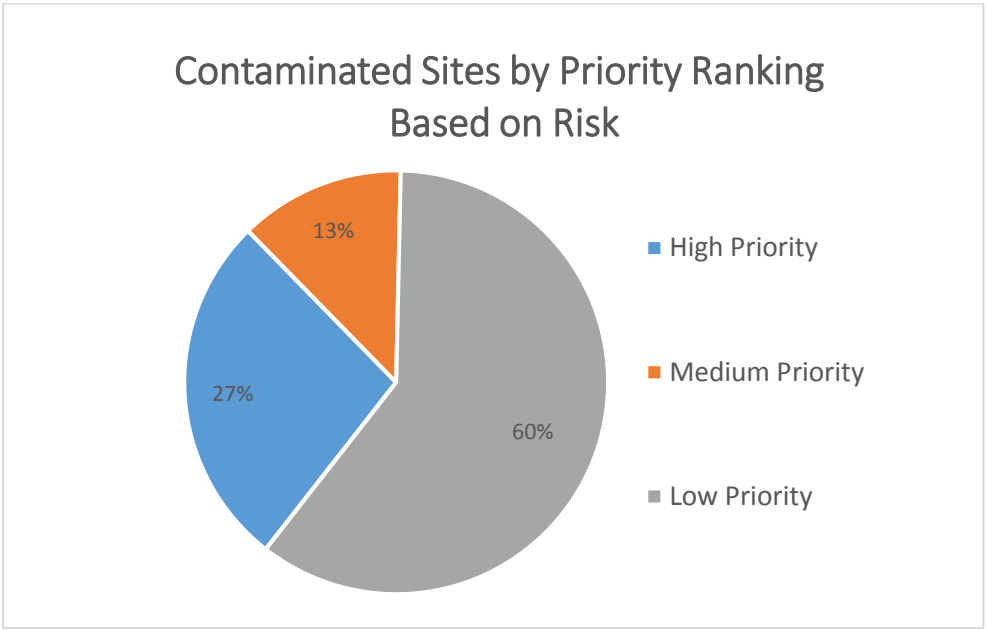


Chart 7 summarizes how active contaminated sites have been prioritized following the site's assessment using the Exposure Tracking Model (ETM). The result provides an evaluation of primary human health and/or ecological pathways present, current human health exposure and the likelihood or potential for future exposure.

Chart 8: Active Sites by Risk Priority



6.2.2 CS Accomplishments

Site Management Statistics

- Project work plans/reports approved: 714
- Onsite inspections: 150
- Sites where long-term monitoring completed: 3
- Compliance reviews verifying status of institutional controls at sites: 225
- Sites where IC follow-up tasks were conducted: 173
- Sites where institutional controls were removed: 20
- Active sites where ICs were established: 10
- DEC Brownfield Cleanup and Assessments (DBACs) completed:
    - City of Whittier – Buckner Building
    - Arctic Village – Former Power Plant
    - Ruby – Former Head Start Building
    - Pitka's Point – Pitka's Point School
- Successful Targeted Brownfield Assessment applications:
    - Kake - Keku Cannery
    - Barrow – ASTAC Property Lease Lot
    - Anchorage – Tesoro-Alpina Service Station
- Approved FY16 DEC Brownfield Assessments and Cleanups (DABC):
    - City of Whittier – Buckner Building
    - Arctic Village – Former Power Plant
    - Ruby – Former Head Start Building
    - Pitka's Point – Pitka's Point School
- Kake – Kake Old Grade School – not completed

Site Discovery Program

- During FY15, CS launched a site discovery initiative funded through an EPA grant to investigate abandoned mine sites as a pilot effort. In FY16, CS conducted site visits and sampling efforts at eight abandoned mines in Prince William Sound. CS drafted reports for the 13 abandoned mine sites visited in both FY15 and FY16, and submitted those to the EPA. CS also conducted an evaluation of the two-year pilot effort and recommended some changes be made for FY17. In FY17, CS will expand the site discovery initiative to include sites other than abandoned mines which may present a greater risk to human health and the environment as more people may be affected by the potential contamination.

Potential Responsible Party Research

- In FY16, CS worked with the Department of Law (LAW) to develop a process for finding potential responsible parties. The process relies on basic research actions to be conducted by CS project managers and more advanced research to be conducted by LAW staff. The LAW held a training for CS on basic research methods and resources. In FY16, CS evaluated whether a specialized unit is needed within CS to assist project managers with potential responsible party searches and coordinate with the LAW.

Regulations

- Regulations governing how risk is calculated and risk assessments performed at contaminated sites were made effective January 1, 2016.

- Regulations governing cleanup levels for contaminated site and leaking underground storage tank sites were developed and issued for two public comment periods.

- A scoping notice was issued in January 2016, to explore changes to the UST Tank Laboratory Approval Program regulations.

Training

- Staff attended training on the following:

    - Fundamentals of Superfund, provided by EPA and funded by the Core Grant

    - No-cost webinar training presentations covering perfluorinated compounds, emerging contaminants, and other topics

    - Internal staff regulations training sessions on individual sections of the Site Cleanup Rules (18 AAC 75)

    - A Statewide Program Meeting/Training was held in Anchorage. The training session included topics on enforcement, project management decision-making, state liability law, potential responsible party searches, cost recovery, quality assurance issues for samples from the field to the lab, understanding detection limits, accounting for background concentrations of heavy metals, calculating alternative cleanup levels under Method 3, regulations, and many other topics with the LAW, experts from the regulated community, SPAR management and staff as guest speakers

- Monthly Statewide All Staff program calls/video conferences included training on topics including: quality assurance, field sampling guidance, and regulations development

- The CS Program sponsored a two-day field sampling course for Alaska's State and Tribal Response Program (STRP) participants. The course was titled How to Conduct Basic Soil and Water Sampling, and provided an overview of the DEC Field Sampling Guidance. The training was for STRP interested parties to gain scientific instruction (classroom and hands-on field training) related to representative environmental sampling. The class provides basic skills for becoming a Qualified Sampler.

Computer Applications and Program Website

- CS accomplishments include the finalization and beta testing of two online calculators used for determining cleanup levels and cumulative risk. These tools were developed by the University of Tennessee through a Memorandum of Understanding with DEC.

- A new website and listserv was launched, designed to help real estate professionals (agents, lenders, appraisers, title searchers, and contractors), as well as home buyers and sellers, determine if real estate they may be buying, selling, or developing is contaminated or may be at risk from known contamination. This page brings together many resources to help the public determine if property has known contamination and what impacts the contamination may or may not have on the use of that property.

- Development began on a 4-phase risk calculator tool to calculate risk and develop alternative cleanup levels under Method 3 for contaminants for the migration to groundwater pathway. This tool is being developed by the University of Tennessee through a Memorandum of Understanding with DEC.

Organization, Initiatives, Policies and Guidance

<u>SPAR Home Heating Oil Tank Work Group</u>

- SPAR staff formed a work group in FY16, led by CS and with participants from all programs, to develop methods for response, characterization, and cleanup of fuel releases from home heating oil tanks (HHOTs). The workgroup analyzed options to assess and mitigate any immediate risks, streamline site investigation, and evaluate potential financial hardship cases along with steps that could be taken to assist homeowners.

- Division staff developed guidelines for homeowners to conduct some limited response actions on their own and also consider a revised approach to HHOT response that may include using a DEC contractor (to conduct the response and cleanup activities at sites where the property owner does not have the ability to do so on their own at the time of the release).

- Staff from both programs (CS and PPR) explored and reported on the following solutions for addressing the following four challenges to the HHOT problem:

  1) Lack of Awareness of the Problem

- Solution: Increase Disclosure During Property Transfers
- Solution: Beef up State Requirements for Home Inspections

2) Poor Prevention of the Problem

- Solution: Establish HHOT Installation Standards

3) Underreporting of the Problem

- Solution: Establish Fuel Handler Inspection Program

4) Cost of Cleaning up the Problem

- Solution: Develop an Insurance Mechanism

- These types of sites present unique challenges to SPAR project managers and homeowners due to the cost associated with spill response and cleanup:
  - Tanks are not inspected before or during home purchasing
  - There is no insurance coverage for tanks in Alaska
  - Homeowners lack the expertise and funding to clean up the spill; or the potential for on-site drinking water well contamination and migration of vapors into occupied homes can result in risks to residents at a time when they can't afford to respond
  - DEC has an obligation to recover all costs associated with the spill and homeowners often need substantial assistance which increases DEC costs that must be recovered, however, repaying DEC for our time and oversight costs on top of cleaning up the contamination is often too much
- What is SPAR doing to address the problem?
  - Developing HHOT siting standards for use by insurance companies, home inspectors, and fuel delivery services
  - Enhancing outreach to homeowners about proper tank installation and maintenance
  - Developing a pilot program to provide funding to homeowners with limited incomes and/or those who lack the ability to pay, in order to address immediate threats caused by spills

Project Manager Tools/Guidance

- Revised the *Field Sampling Guidance for Contaminated Sites and Underground Storage Tank Sites,* now available on the CS website. The purpose of the guidance is to present methods and equipment options for sample collection at contaminated site and leaking underground storage tank sites. The new guidance provides a discussion of the preferred options for sampling approaches which is helpful for the development of CS approved site characterization or cleanup work plans under 18 AAC 75.

- A technical memo was developed and published explaining Qualified Sampler Training and Training Programs.
- The CS Program's Site Closure Memorandum was substantially updated and republished.
- A memo describing the process for requesting and receiving approval of laboratory analytical method modifications was published.
- Major updates to the *Procedures for Calculating Cumulative Risk and Procedures for Calculating Cleanup Levels* were completed and issued for public comment.

Brownfield Program Integration

Brownfield outreach, support and project management work, including Targeted Brownfield Assessments and DBACs, was distributed and integrated across the program's project management staff.

6.2.3 CS FY17 Program Priorities

Alaska Environmental Covenant Act

The CS program is seeking adoption of an environmental covenant act that would establish a legal framework for utilizing environmental covenants as institutional controls to manage land use at contaminated sites where unrestricted future land use is not appropriate due to contaminants that remain on-site. Cleaning sites to levels suitable for unrestricted land use is not always feasible or necessary. In cases where DEC approves a cleanup as being complete and protective based on contaminants being managed in place and the landowner(s) agrees to limit future activities by people could be exposed or contaminants could be spread (i.e., no drinking water wells will be installed on-site, or the property will not be used for residential purposes), effective institutional controls are necessary. Alaska is one of seven states nationally that does not have an environmental covenant law. An effective environmental covenant law helps to manage residual contamination and risk, manage current and future landowner's liabilities, and promote property transfers and reuse of contaminated sites.

CS/PPR Spill Response Cross Training

A CS program priority is to continue the CS and PPR staff evaluation of the type and scope of training opportunities to enhance staff skills and help equip CS staff as necessary to support PPR involvement with large spill events. This will include evaluating and noting any specialized skills or knowledge CS or PPR staff may have, such as chemistry or risk assessment within CS.

Regulation Packages

Several regulation projects are in the works or proposed for FY17. These include:

- Changes are proposed to Article 8 of Chapter 78 dealing with how laboratories are approved for conducting laboratory analyses of soil, water or air samples at leaking underground storage tanks and contaminated sites. The changes proposed would issue approvals to labs

which provide certifications from either the National Environmental Laboratory Approval Program or the Department of Defense Environmental Laboratory Approval Program accreditation bodies verifying the lab's capacity to run analyses under Chapters 75 and 78. The proposed amendments will go out for public comment in the fall of 2016.

- A scoping notice was issued in late summer of 2016, for changes to petroleum cleanup levels and how they are calculated for spills, contaminated sites and underground storage tanks, under Methods 1, 2 and 3. The scoping effort included internal briefings and public workshops. Pending the results and feedback from the scoping effort, a second, more refined scoping effort may follow, or the program may proceed directly to drafting amendments for formal public comment.

- Merging portions of Chapter 78 (Underground Storage Tanks) with other regulatory chapters including Chapter 75 (Site Cleanup Rules). During FY17, the department will analyze the two chapters and investigate any federal rule requirements and develop a draft set of amendments to consolidate articles and sections.

Changes are proposed for Chapter 78 (Underground Storage Tanks) incorporating EPA updates to 40 CFR 280 from July 2015. The changes include federal updates dealing with emergency power generators, airport hydrant fuel distribution systems, secondary containment and interstitial monitoring, testing of spill prevention equipment and overfill prevention equipment inspections, and operation and maintenance walk-through inspections. There are also structural changes to streamline and improve the usability of the regulations. Following review by the state LAW and EPA, the proposed amendments will go out for public comment in the spring of 2017.

Continue Outreach with Alaska Native Corporations

Expand upon initial collaboration, started in early 2016, with Alaska regional and village Native Corporations and federal agencies to seek solutions to cleanup of contaminated lands conveyed from the federal government to native corporations under the Alaska Native Claims Settlement Act (ANCSA). Follow-up with federal, state and local stakeholders to maintain open and useful communications in this effort. Increase knowledge of Brownfields services and funding to determine whether or not such tools have a role in addressing contamination on native corporation lands.

Outreach efforts to real estate, banking, and mortgage companies

Expand upon outreach efforts with real estate professionals to improve their understanding of the contaminated site cleanup process with a goal of supporting property transfers and reuse in a protective, transparent manner.

State owned site coordination

Obtain the services of a meeting/process facilitator to assist with communicating with other state agency points of contact and devise tailored plans to help those agencies manage their contaminated sites and the associated liability and property impacts. Convene a series of facilitated meetings with

agency representatives to develop the overarching environmental management principles that will form the basis of agency plans. Use the resulting tailored plans to replace the 1997 Memorandum of Agreement between DEC and the state agencies.

Brownfields integration for CS staff

Continue the integration of Brownfield policy and project management throughout the CS program, so all project managers are aware of funding opportunities and services and are able to use staff resources at their disposal to make brownfield site determinations. Further, the program seeks to increase the degree to which all program staff can coordinate and network with municipalities, tribes, and tribal response program (TRPs) personnel to support re-use and re-development opportunities at contaminated sites.

Site Discovery

Follow-up on the successful FY15 implementation of this site discovery initiative with continued preliminary assessments on abandoned mine sites. In addition, expand the site discovery efforts to include other types of sites where hazardous substances are known or suspected to have been spilled, released or improperly disposed of in a manner that may pose unacceptable risks to people or the environment.

6.3 Response Fund Administration (RFA)

Mission

The mission of the RFA Program is to manage the Oil and Hazardous Substance Release Prevention and Response Fund (OHSRPRF or Response Fund) as a viable, long-term funding source for the state's core spill prevention and response programs.

The RFA Program is the administrative arm of SPAR. The program manages the expenses and revenues in the Prevention and Response Accounts of the OHSRPRF by recovering state costs for responding to spills from responsible parties.

Services provided by RFA Program:

- Develop budget requests and spending plans to limit annual funding requests to revenue available from the Prevention Account revenues.
- Manage federal grants and Reimbursable Service Agreements for SPAR.
- Develop a long-term strategies for maintaining core spill prevention and response program with available revenue.
- Provide administrative support to the entire SPAR division.
- Manage capital improvement program expenditures for cleanup at state owned and state lead facilities.
- Track all state spill response expenditures and revenues, and initiate timely billings to responsible parties to ensure maximum recovery of state costs.
- Identify and pursue other cost recovery sources, such as the Federal Oil Spill Liability Trust Fund, and participate in the settlement of cost recovery claims with the LAW.
- Manage and maintain contracts with private firms engaged in cleanup and remediation work for the SPAR.
- Maintain all the SPAR program databases for the division and develop any improvements to those databases.
- Prepare an annual report on the Response Fund and RFA accomplishments.
- In the case of a major spill response, support the Finance Section within the Incident Command System.

6.3.1 RFA Data Review

The financial data compiled by the RFA Program is FY16 data. There are two different sets of financial data. One set of financial data includes all cost recovery data, federal grants and Reimbursable Service Agreements (RSAs) where SPAR work is done at a particular site. The other is

only the Cost Recovery data where responsible parties have been billed for SPAR services at a particular site.

The industry types shown below reflect how SPAR programs categorize their work. The other industry category shown below includes lighthouses, telecommunications, parks and recreation, logging, state oversight of projects, and other small industry categories. The residential category includes HHOTs and other types of residential spills.

Chart 9: Total Amount Billed Categorized by Industry Type

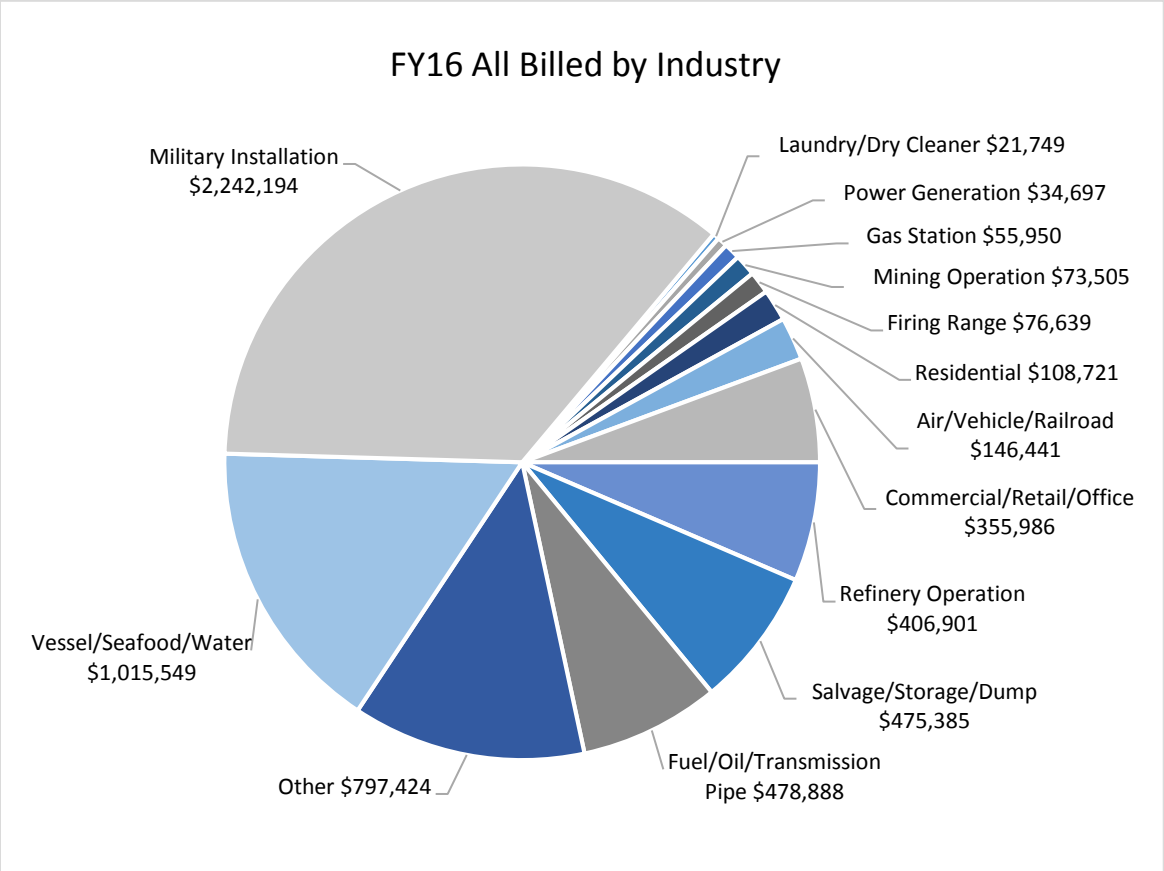
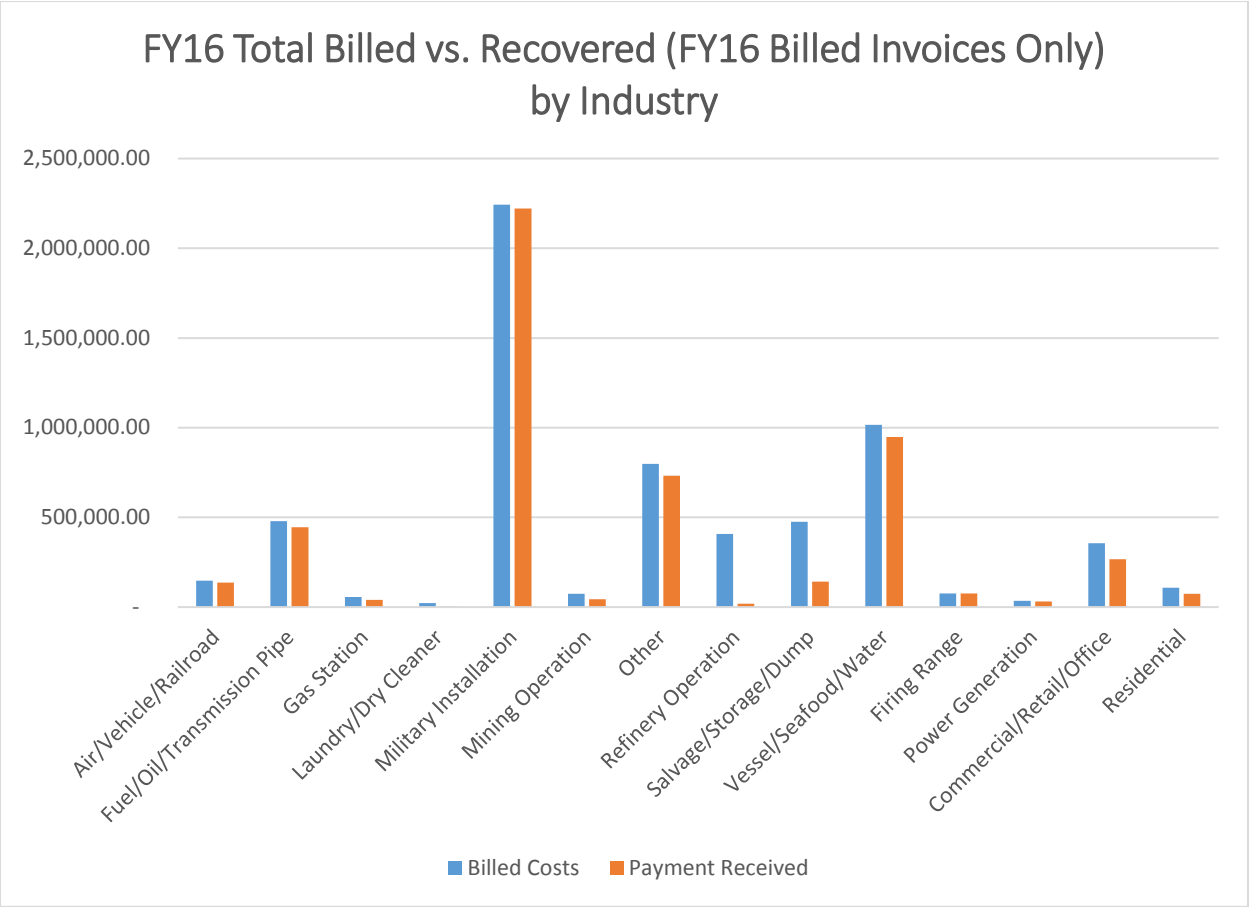


Chart 10: Total Amount Billed vs. Amount Recovered



SPAR Recovered Costs by Industry Type from July 1, 2015 through June 30, 2016

Response costs recovered via Cost Recovery, Grants and RSA's

Revenue collected during the fiscal year for FY16 invoices

Industry Type	Billed Costs	Percentage of Billed Costs	Payment Received	Percentage of Payments Received	Sum of Pending Balance	Percentage outstanding
Air/Vehicle/Railroad	146,440.66	2.33%	136,780.53	2.64%	9,660.13	0.87%
Fuel/Oil/Transmission Pipe	478,887.60	7.61%	444,741.21	8.59%	34,146.39	3.08%
Gas Station	55,949.67	0.89%	40,815.68	0.79%	15,133.99	1.36%
Laundry/Dry Cleaner	21,748.80	0.35%	3,647.53	0.07%	18,101.27	1.63%
Military Installation	2,242,194.25	35.65%	2,221,925.80	42.89%	20,268.45	1.83%
Mining Operation	73,504.78	1.17%	43,326.15	0.84%	30,178.63	2.72%
Other	797,423.83	12.68%	732,532.69	14.14%	64,891.14	5.85%
Refinery Operation	406,901.46	6.47%	18,082.37	0.35%	388,819.09	35.04%
Salvage/Storage/Dump	475,384.80	7.56%	142,129.62	2.74%	333,255.18	30.03%
Vessel/Seafood/Water	1,015,548.82	16.15%	948,208.74	18.30%	67,340.08	6.07%
Firing Range	76,638.82	1.22%	76,474.00	1.48%	164.82	0.01%
Power Generation	34,696.88	0.55%	32,125.19	0.62%	2,571.69	0.23%
Commercial/Retail/Office	355,985.95	5.66%	265,920.10	5.13%	90,065.85	8.12%
Residential	108,720.75	1.73%	73,619.01	1.42%	35,101.74	3.16%
Grand Total	**$6,290,027.07**	**100.00%**	**$5,180,328.62**	**100.00%**	**$1,109,698.45**	**100.00%**

SPAR Recovered Costs by Industry Type from July 1, 2015 through June 30, 2016

Response costs recovered via Cost Recovery Only

Revenue collected during the fiscal year for FY16 invoices

Industry Type	Billed Costs	Percentage of Billed Costs	Payment Received	Percentage of Payments Received	Sum of Pending Balance	Percentage outstanding
Air/Vehicle/Railroad	146,440.66	2.33%	136,780.53	2.64%	9,660.13	0.87%
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Vessel/Seafood/Water	1,015,548.82	16.15%	948,208.74	18.30%	67,340.08	6.07%
Firing Range	76,638.82	1.22%	76,474.00	1.48%	164.82	0.01%
Power Generation	34,696.88	0.55%	32,125.19	0.62%	2,571.69	0.23%
Commercial/Retail/Office	355,985.95	5.66%	265,920.10	5.13%	90,065.85	8.12%
Residential	108,720.75	1.73%	73,619.01	1.42%	35,101.74	3.16%
Grand Total	**$6,290,027.07**	**100.00%**	**$5,180,328.62**	**100.00%**	**$1,109,698.45**	**100.00%**

Significant action has been occurring in SPAR to increase cost recovery. The Division will never recover all of our costs because much of the work we do is not a billable activity. For example, we cannot bill for prevention work (contingency plans, technical assistance, and inspections) or spill drills which are a substantial portion of our work. However, we have taken dramatic steps to increase cost recovery when it is plausible.

SPAR, with the assistance of the LAW, adopted new cost recovery (CR) regulations describing how cost recovery will occur. Statutory language requesting these regulations has existed for ten years but never been implemented until now.

SPAR has successfully taken over the informal cost recovery billing process from LAW and the Division is staying within our budget of $450 thousand for LAW services for the last two years.

SPAR has made several changes to billing in FY16 in order to make collections easier. Improvements include: implementing a standard interest rate on invoices 60 days past due or longer; developing procedures to determine a responsible party's inability to pay; establishing rules within our Bill Quick system to automate billing and remove non-billable time entries.

We also requested payment for the first time for nearly 350 sites that had not been previously billed. Only 3% of the sites that had never been billed remain to be evaluated. We do not bill sites where we cannot find a responsible party, Underground Storage Tank (LUST) grant recipients (federal requirement), and some federal sites that are under another payment system.

Overall, we have reduced errors, increased billing frequency, and provided better customer service. These changes have improved cost recovery efforts and annual cost recovery revenue varies between $1.1 million and $1.4 million.

6.3.2 RFA Accomplishments

There are a number of sections within the RFA program. Below is a brief description of each, followed by more detail regarding their accomplishments:

- Director's office – Includes the SPAR director and one professional support staff. The section provides policy direction to SPAR and coordinates division wide projects.
- Budget and Finance – Includes the Administrative Operations Manager and four support staff. The section prepares the operating and the capital budget for SPAR, monitors expenditures and tracks funding for SPAR.
- Cost Recovery – Includes an Accountant and two support staff to issue invoices and track cost recovery funding for SPAR.
- Information Technology – Includes one Data Processing Manager, four support staff, and one intern to support all the program databases that SPAR is responsible for maintaining.

- Contract Management – Includes an Administrative Officer and one accounting staff position to prepare and track the numerous contracts SPAR issues on contaminated sites.

- Administrative Support - Includes several Office Assistants (four in Anchorage and one in Juneau) who process purchasing, travel and one card requests and other administrative duties for SPAR.

Director's office

During FY16, the previous year's merger of two programs solidified, as staff from the former Industry Planning and Preparedness (IPP) program and Prevention and Emergency Response Program (PERP), were assigned duties within the newly organized Prevention Preparedness and Response (PPR) program. Leadership began to embark on training and to:

- align planning with response efforts

- utilize staff time to its best potential, by allowing responders to work on planning when not responding and planners to work on response when not reviewing plans

- provide clarity and consistent expectations, to better serve the regulated community and our partners

While the reorganization can be attributed to a July 2015 date, it is less of an event and more accurately described as a process. This process not only envelopes FY16 and FY17, but will require several years of training, re-evaluation, and adjustments. Focused efforts in FY16 included revision of various internal training resources (Cost Recovery Manual, Safety Manual, and Contaminated Sites Project Manager Handbook), some of which were completed and some are in progress.

As the PPR program reorganized, it became clear our records should also be evaluated and reorganized to better align with our work processes and to become more efficient. A workgroup was formed with representatives from each program to revise the current Records Retention & Disposition Schedules into one unified updated schedule. Additional work is in progress on this update, reorganization of server directories for electronic files, file naming conventions, and other related projects addressed in a SPAR Records Plan.

The budget reductions of FY16 ($620K attributed to reorganization efforts and $208K reduction in general funds due to unallocated GF reduction), resulted in elimination of 6 positions. This $828K total reduction will represent cost savings in subsequent budget years. A few highlights from this year, observed by the Director's office:

- Even with reductions in our budget, SPAR spent much less than the amount allocated in the FY16 budget. For the last three years, SPAR has managed its resources to allow funds to lapse back into the prevention account and be available for future years.

- HB158, sponsored by Representative Muñoz, provided additional funding to SPAR in FY16. Governor Walker signed HB158 effective July 2015, providing a surcharge on refined fuel to help fund SPAR. Due to fund sufficiency concerns, revenue from the new surcharge is

appropriated to the fund in the year in which it is collected. In FY16, the legislature appropriated an up-front transfer of $7.45 million to the Oil and Hazardous Substance Release Prevention and Response Fund in anticipation of the first year's collected revenue.

- We finalized several regulatory packages in FY16, including Contaminated Sites Risk Assessment Amendments, Financial Responsibility Amendments, Spill Prevention and Response Plan Amendments, and Cost Recovery Amendments. Several other regulatory packages are planned or in process.

- The Director's office performed significant scoping and outreach in FY16 for a prevention initiative related to spills from Class 2 Fuel Storage Facilities. A related regulatory package is being developed.

- There was a program-wide effort to produce a new annual report, providing useful and updated information to the public.

Budget and Finance

- The SPAR reorganization continued to create a lot of administrative work for RFA as 117 delegation of authority forms were updated for key staff and 97 Personnel Actions Forms were prepared and processed. SPAR has approximately 142 PCNs and turnover was higher this year due to retirements.

- In January 2016, RFA responded to the Governor's initiative to control position hiring. RFA prepared approximately 26 hiring waivers during a six-month period (Jan-June 2016).

- The new accounting system called IRIS was started July 1, 2015, creating a huge administrative workload for RFA as we transitioned from the prior accounting system (AKSAS) to IRIS. The SPAR operating and capital structures were established, and new accounting procedures/processes were established and adjusted throughout the year. The financial processing, at the end of fiscal year 2016, was very difficult due to the complexity and slowness of the IRIS, and the availability of the reporting system called ALDER. SPAR had no major financial issues at year end due to the diligent work of administrative staff.

- During FY16, RFA managed $4.7 million in actual federal grants that covered multiple fiscal years and $369.5 thousand in actual Reimbursable Service Agreements (incoming and outgoing funding)

Cost Recovery

- SPAR, in conjunction with LAW, has successfully finalized the new Cost Recovery Regulations which provides more detailed and complete guidance on the entire cost recovery process, including better management of the inability to pay processes and responsible party identification.

- SPAR's regulatory update clarified SPAR's ability to implement interest on past due invoices. The interest rate became effective June 1, 2016, on all forthcoming invoices that are 60 days or more past due. The resulting interest will reside in the Prevention Account.

- Transition of informal invoices to the Division continues to reduce our LAW cost; the transition has allowed RFA to stay well below our budgeted RSA amount of $450k in FY16.

- Only 3% of the 'do not bill' sites remain to be categorized or billed to a responsible party. Do not bill list is categorized by Grants, no viable RP, LUST grant recipient sites (acting in good faith), LUST grant recipient sites (closed), Pending Cost Recovery Action Sheet (CRAS), past CRAS and more**.**

- Cost Recovery met both performance objectives that were set in FY15: We have exceeded the 75% target of billing cost recoverable sites and have met the 50% target for recovering billable costs.

Information Technology (IT)

- Rolled out improvements to the Industry Preparedness database application which allow approved and under review contingency plans to be displayed on SPAR's public website, fulfilling a long-standing request from legislators, industry and the public.

- Developed and deployed the Non-Tank Vessels (NTV) database application. This application replaces a legacy Access database application that was non-functional. The NTV application saves program staff significant time and increases efficiency. Program staff can be easily trained and the new application significantly enhances reporting, communication and certification capabilities.

- Completed phase one (Analysis and Database Remediation) of the Underground Storage Tanks database application replacement project. Phase two (Application Development and Roll-Out) is on-going with a release scheduled in early 2017.

- Provided analysis and recommendations for electronic content management in SPAR and worked with SPAR leadership to align planned SPAR-IT work with division priorities.

- Developed and released numerous, long-requested improvements to the SPAR Contaminated Sites application which improve usability and staff efficiency.

- Released improvements to the SPAR Term Contracts application and reporting system which allows RFA to better track and manage term contracts.

- Created a consolidated Regulations web page to better communicate regulations changes to the government, the public and the private sector.

- Designed and implemented a Service Oriented Architecture (SOA) and System of Record for SPAR databases and application. These technologies promote SPAR data consistency, code reuse and efficiency across division applications. This architecture is the basis for many of the significant software development accomplishments detailed above. Key components of the system are listed here.

    - Document Management System (DMS) - allows documents to be uploaded and related to records for any SPAR database application.

- Affiliation Tracking Module (ATM) - can track affiliations across SPAR databases along with their contact/addressing information for any SPAR database application.
- Vessels component - can be configured and used in any SPAR database application to track vessel information.

Contract Management

- Reviewed and processed 181 NTP payment requests, totaling over $6.7 million.
- Closed and Completed 11 NTPs
- Amended 11 term contracts;
  - Four Spill Response and Technical Assistance
  - Three Response to Oil and Hazardous Substance Spills
  - Four Hazardous Substance Assessment and Cleanup
- Managed 33 NTPs, valued at over $12.3 million.
- Worked closely with DAS Procurement and Accounts Payable to transition contract accounting information from the previous accounting system (AKSAS) to the current one (IRIS).
- Conceptualized necessary changes to the Term Contracts Database as a result of adopting IRIS, and worked with SPAR IT to implement changes.
- Updated NTP contract and accounting forms to reflect changes required due to changing accounting systems.
- Conducted an audit of the term contract database and hard-files to ensure accurate accounting of contracts and NTP's.

Administrative Support

- Continued to establish procedures and checklists to improve administrative support functions for the Anchorage SPAR Office.
- Planned, organized, and assisted in an ongoing effort to accommodate office staff and computer equipment in workspaces.
- Archived approximately 1,510 site files for the Contaminated Sites Program and Prevention Preparedness & Response Program.
- Planned and initiated additional archiving efforts for all closed sites for the Contaminated Sites Program and Prevention Preparedness & Response Program in Anchorage.
- Processed approximately 204 site file transfer requests.
- Processed and finalized approximately 2,112 letters for division staff.

- Received and responded to 150 public record requests.
- Received approximately 291 Contingency Plan Verification logs.
- Administered and issued the parking permits for the Anchorage SPAR office.

6.3.3 RFA FY17 Program Priorities

The Cost Recovery (CR) section seeks reimbursement of SPAR costs in accordance with Alaska Statutes (AS) 46.08.070, AS 46.04.010, AS 46.03.822 and AS 46.03.760. SPAR is required to recover costs from any person liable under AS 46.04.020, AS 46.09.020 AS 46.03.822 or AS 46.03.760. Costs are defined as those expended by the department related to cleaning up or containing a discharge. They may include direct activities, support costs of direct activities, and interest charges for delayed payments.

To meet these obligations, SPAR establishes a unique financial code to each incident or site for purposes of tracking all state costs incurred in the accounting system. These unique financial codes link to incidents or sites that are tracked separately.

During FY16, RFA implemented cost recovery regulations which provided a better description of what is billable and the process to be used for ability to pay. The regulations also allowed standard interest to be assessed on invoices that are past due for 60 days or more. RFA continued to tighten the cost recovery guidelines and procedures on outstanding billings to meet the performance measures.

Another priority for RFA is maintaining and improving the various databases that contain SPAR program data. RFA Information Technology (IT) made significant progress during FY16 and the IT work continues to be a priority in FY17.

Please see RFA Accomplishments section 5.3.2 for additional information on RFA efforts.

6.3.4 RFA Biennial Report Elements

Alaska Statute AS 46.08.060 requires the Department of Environmental Conservation (DEC), the division of Spill Prevention and Response (SPAR), to report on certain aspects of the Oil and Hazardous Substance Release Prevention and Response Fund (Response Fund). This report is due no later than the 10th day following the convening of each first regular session of the legislature. The report can be very large. In the interest of reducing paper, the report tables are described in the appendices section of this report, and are provided separately on our website at **http://dec.alaska.gov/spar/reports.htm#2016**

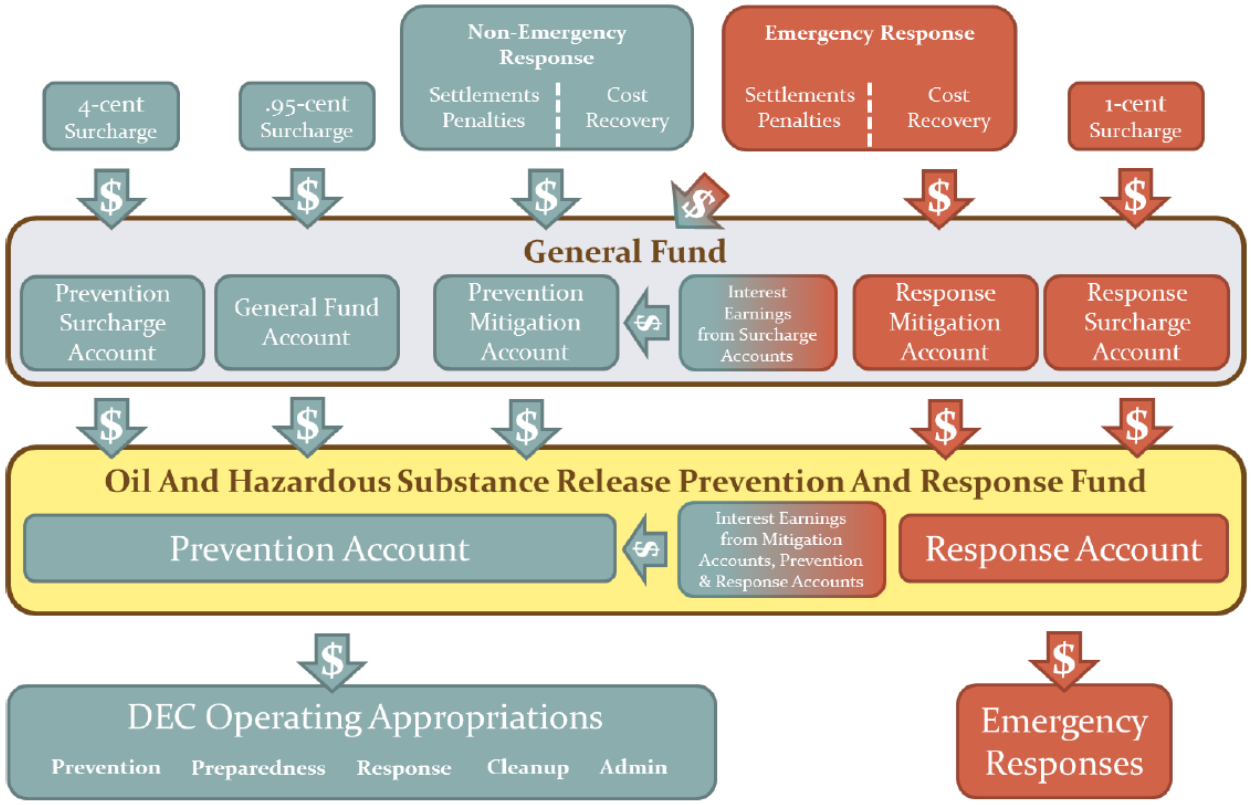
History of the Response Fund

The Oil and Hazardous Substance Release Prevention and Response Fund (Response Fund) was created by the Legislature in 1986 to provide a readily available funding source to investigate, contain, clean up and take other necessary action to protect public health, welfare and the environment from the release or threatened release of oil or a hazardous substance. Alaska Statute 46.080.030 states: "It is the intent of the legislature and declared to be the public policy of the state that funds for the abatement of a release of oil or a hazardous substance will always be available." (SLA 1986 Sec.1 Ch. 59).

The statutes governing the Response Fund were amended in 1989, 1990, 1991, 1994, 1999, 2006 and 2015. These amendments increased the scope that defines how the Response Fund can be used and it also increased the DEC's reporting requirements. In addition, the 1994 amendment made major changes to the Response Fund structure by dividing the Response Fund into two separate accounts. The first account is the Response Account and the second account is the Prevention Account. The changes became effective on July 1, 1994.

The 1999 amendment changed the requirement for an annual fund status report to the legislature to a biennial status report. The 2006 amendment changed the surcharge levied on crude oil produced in the state. HB3001C amended Sec. 28 of AS 43.55.300 and imposed a Prevention Account surcharge of $.04 (formerly $.03) per barrel of oil produced from each lease or property in the state, less any oil the ownership or right to which is exempt from taxation. Sec. 26 of AS 43.55.201 was also amended to change the Response Account surcharge of $.02 to a $.01 per barrel of oil produced from each lease or property in the state.

Due to declining oil production and related revenues, 2015 legislation (HB 158) amended AS 43.40 to add a new $.0095 per gallon environmental surcharge on refined fuel sold, transferred or used at the wholesale level. The tax includes gasoline and heating oil but not aviation fuel or fuel used on the Alaska Marine Highway system. The surcharge was effective July 1, 2015, and the revenue generated by the new surcharge is appropriated annually to the Prevention Account.



Response Account

The Response Account may be used to finance the state's response to an oil or hazardous substance release disaster declared by the governor, or to address a release or threatened release that poses an imminent and substantial threat to the public health or welfare, or to the environment. If the Response Account is accessed for any incident other than a declared disaster, within 120 hours the Commissioner of DEC must provide the Governor and the Legislative Budget and Audit Committee with a written report summarizing the release, the State's actions and associated costs, both taken and anticipated, and any other information deemed appropriate.

The Response Account receives funding from two different sources:

1. A surcharge of two cents per barrel that is levied on each taxable barrel of oil produced in the state, which is deposited to the response surcharge account until March 31, 2006. Effective April 1, 2006, House Bill 3001C changed the surcharge tax of two cents to a one cent per barrel.

2. Money that is recovered from parties financially responsible for the release of oil or hazardous substance which is deposited in the response mitigation account.

The one cent per barrel surcharge is suspended when the combined balances of the surcharge account, the response mitigation account and the unreserved and unobligated balance in the Response Account itself reaches or exceeds $50 million.

The Response Account balance reached $50 million for the first time during the quarter ending December 31, 1994. Therefore, beginning April 1, 1995, the surcharge collection was suspended.

Access to the fund for the response to the North Slope Pipeline spills occurred on November 20, 2006. This action lowered the balance of the account below $50 million. On April 1, 2007, the Department of Administration imposed the $.01 cent surcharge to restore the balance to $50 million. Spill responses reduced the balance again over the years and on July 1, 2013, the $.01 surcharge was re-imposed to restore the balance to $50 million. The combined balance of the Response Account as of June 30, 2016, was $42.6 million. As a result, the $.01 cent surcharge has remained on through the Fiscal Year 2016.

Prevention Account

The Prevention Account may be used to investigate, evaluate, clean up, and take other necessary action to address oil and hazardous substance releases that have not been declared a disaster by the Governor, or do not pose an imminent and substantial threat to the public health or welfare of the environment. The Prevention Account may also be used to fund Alaska's oil and hazardous substance release prevention programs and to fund activities related to cost recovery.

The Prevention Account is financed with a $.04 per barrel surcharge and fines, settlements, penalties and interest. The Prevention Account receives funding from four sources:

1. a surcharge of four cents per barrel that is levied on each taxable barrel of oil produced in the state which is deposited in the prevention surcharge account;

2. fines, settlements, penalties, and costs recovered from parties financially responsible for the release of oil or a hazardous substance deposited into the prevention mitigation account;

3. interest earned on the balance of each of the following accounts deposited into the general fund and credited to the Prevention Account: (a) the prevention account; (b) the prevention mitigation account; (c) the response account; and (d) the response mitigation account; and

4. a surcharge of $.0095 per-gallon on refined fuel sold, transferred or used at the wholesale level in Alaska.

The legislature annually appropriates money from the prevention surcharge and prevention mitigation accounts into the Prevention Account to support the State's oil and hazardous substance spill clean-up efforts and spill prevention and preparedness planning activities (AS 46.08.040(a)(2)) which is part of the Spill Prevention and Response (SPAR) annual budget).

The Prevention Account balance based on the Department of Administration's quarterly report on the Oil Surcharge account shows an unobligated balance of $4.0 million at the end of FY16. Due to the declining Prevention Account balance in recent years, HB158 passed the legislature in the spring of 2015. The majority of SPAR spills and resulting contaminated sites are associated with refined fuel so HB158 assessed a $.0095 per gallon surcharge on most refined fuel. This legislation was anticipated to bring in approximately $7.5 million annually to fund SPAR's important prevention

and response activities. In addition, SPAR continues to focus on increasing collections from cost recovery which are deposited in the Prevention Account.

ALASKA STATUTES

The Alaska statute pertaining to the issuance of this report AS 46.08.0606 is available at **http://www.legis.state.ak.us/basis/statutes.asp#46.08.060** and on our website at **http://dec.alaska.gov/spar/reports.htm#2016**

Tables Related Alaska Statutes

- AS 46.08.060(a)(1): Table A: Expenditures and Obligations
- AS 46.08.060(a)(2) A & B:

Table B: Prevention Mitigation & Response Mitigation Revenues

Table C: Revenue Source History

- AS 46.08.060(a)(3): Table K: Municipal Spill Responses
- AS 46.08.060(a)(4):

    Table D: Contracts in Excess of $10,000.00

    Table F: Project Expenditures

    Table G: Personal Services Costs for Projects

- AS 46.08.060(a)(5): Table E: Appropriations To/From Prevention Account
- AS 46.08.060(b)(1):

    Table I: Inventory of Active CS and LUST Sites

    Table J: Inventory of Closed CS and LUST Sites

- AS 46.08.060(b)(2): Table H: Inventory of Active CS and LUST Sites By Priority

7.0 Appendices

Spill Prevention and Response (SPAR) has a number of databases to track various oil and hazardous substance projects. SPAR also tracks the financial expenditures, obligations and revenues for each project. A number of financial and program tables are produced annually by SPAR and are formally transmitted to the Alaska State Legislature every other year in the Biennial report, which is required by AS 46.08.060.

The financial and program tables are listed below with a brief description and statutory reference, links to these tables can be found on our website at
http://dec.alaska.gov/spar/reports.htm#2016

Table A: Expenditures and Obligations - AS 46.08.060(a)(1)

This table summarizes the expenditures and year-end obligations for appropriations funded by the Oil and Hazardous Substance Prevention and Response Fund in Fiscal Year 2016.

Table B: Prevention Mitigation & Response Mitigation Revenues - AS 46.08.060(a)(2) A & B

This table summarizes by project, deposits made in FY16 to the Prevention and Response mitigation accounts, and includes all monies collected by the department as cost recovery, fines, penalties or settlement payments related to activity funded by the Oil and Hazardous Substance Release Prevention and Response Fund.

Table C: Revenue Source History - AS 46.08.060(a)(2)

This table summarizes the various funding sources appropriated to the Oil and Hazardous Substance Release Prevention and Response Fund from FY02 through FY16. The table includes program receipts or revenues from outside parties for specific program expenditures; mitigation revenue which includes interest earned on surcharge deposits, cost reimbursement, fines, penalties or settlement payments from parties financially responsible for incidents or sites for which the state expended monies; and oil surcharge revenue which includes collections in the prior year of the conservation surcharge (5 cents) imposed on oil produced in the state.

Table D: Contracts in Excess of $10,000.00 - AS 46.08.060(a)(4)

This table lists all contracts in excess of $10,000 funded by Oil and Hazardous Substance Release Prevention and Response Fund in FY16. The list provides the contract obligations and related expenditures.

Table E: Appropriations To/From Prevention Account - AS 46.08.060(a)(5)

This table summarizes the operating, capital and other appropriations made from and to the Oil and Hazardous Substance Release Prevention and Response Fund in FY16.

Table F: Project Expenditures - AS 46.08.060(a)(4)

This table lists all projects for which expenditures occurred in the Oil and Hazardous Substance Release Prevention and Response Fund in FY16.

Table G: Personal Services Costs for Projects - AS 46.08.060(a)(4)

This table lists all personal services expenditures for projects made from the Oil and Hazardous Substance Release Prevention & Response Fund in FY16.

Table H: Inventory of Active Contaminated Sites & Leaking Underground Storage Tank Sites

This table lists sites alphabetically by location and shows priority classifications.

Table I: Inventory of Active Contaminated Sites & Leaking Underground Storage Tank Sites

This table lists sites alphabetically by location.

Table J: Inventory of Closed Contaminated Sites & Leaking Underground Storage Tank Sites

This table lists sites alphabetically by location.

8.0 Acronyms and Abbreviations

A list of acronyms and abbreviations used frequently throughout this report can be found on our website at **http://dec.alaska.gov/spar/reports.htm#2016**