

The logo for NRC NEWSLETTER. 'NRC' is in a large, bold, blue font with a green and yellow swoosh under the 'R'. 'NEWSLETTER' is in a smaller, blue, sans-serif font to the right.

## A message from Lou O'Brien

I recently joined the NRC team on September 14, 2015 as the SVP Sales and Marketing. I am excited to be part of such a broad international organization that brings highly technical and diverse capabilities to many locations around the globe. Over the past six weeks, I have had the opportunity to visit many of our operations, both domestic and international. I have enjoyed meeting lots of our talented, skilled employees committed to providing a highly professional service to our customers. In the upcoming months, I hope to visit some of our customers to discuss our successes, challenges, and opportunities for growth.

NRC is an extremely unique company with a wide variety of services unmatched by almost any other vendor. Whether it be the highly specialized services of our Hazmat and firefighting team, to the unique waste processing and product sales and distribution of our folks in Alaska, to our oil spill response, standby, industrial cleaning, tank cleaning, marine compliance and response, site remediation, waste management, pre-

booming, and many more; our customers come to rely upon us for our expertise and full complement of services.

Over the upcoming months, I will be concentrating on how we can grow our business by developing strategies to offer more of our services to our existing base of customers, better branding and communicating the unique values and services that NRC has to offer, and introduce new customers to our unique group of services. We have much to be proud of and much to offer, so let's do our best to get the message out. We are NRC, we bring outstanding environmental, industrial, compliance and response solutions around the globe! I look forward to hearing many excellent ideas from both our employees and customers on how we can accomplish our goals. In the meantime, feel free to reach out to me at [LouOBrien@nrcc.com](mailto:LouOBrien@nrcc.com).



*Lou O'Brien*

Senior V.P. Sales & Marketing

# Metaline Falls Geosynthetic Project



NRC completed a stream bank isolation and stabilization project in Metaline Falls, Washington during September of 2015 for a national Engineering and Consulting firm. The purpose of the project was to improve the riparian area adjacent to Sullivan Creek against erosion and spring thaws because the area housed an existing ground water treatment bank. Crucial to the success of the project was completing the work before the end of September in order to coincide with migratory fish patterns and fall water flows.

Site preparation tasks included the installation of streamside erosion and sedimentation controls, turbidity curtain and fish curtain. After those controls were installed, NRC implemented a fishing herding program, which was specified and overseen by multiple regulatory agencies and involved NRC technicians manually herding fish downstream.

Diversion of the stream flow was accomplished by a diversion structure of CY sandbags, diverting flow into a nearby seasonal channel upstream of the work area. NRC was challenged by the flow of water increasing in the river from 50 cubic feet per second (cfs) to over 220 cfs on the day of mobilization due to an

unexpected release of water from a municipal dam 3.5 miles upstream of the work site. NRC installed a secondary structure immediately downstream of the initial diversion structure. A small drainage trench was installed and an 8" dry prime diesel powered pump was also mobilized and utilized.

Once Sullivan Creek was successfully diverted away from the treatment bank NRC started the stabilization process, which began with skillful clearing of vegetation from atop the treatment bank. Existing gabion baskets were realigned, filled, and compacted with imported aggregate material. NRC installed and anchored non-woven geotextile over filled gabion baskets and coir soil encasements in a terraced fashion along the slope of the bank. The entire bank was covered with large boulders to aid in the erosion control.

NRC installed two permanent habitat improvement structures and three single inverted trees at the toe of the embankment. The rest of the diversion structure consisted of large boulders installed out into Sullivan creek thereby deflecting water flow away from the treatment bank. NRC replaced the stream bed to its original state.

NRC's crews worked 7 days a week from mobilization to demobilization in support of the critical project schedule without any health and safety incidents.



## Alaska LNG Project

NRC is the primary contractor for an exciting new LNG plant construction project in Alaska known as the 'Alaska LNG Project'. The project will develop Alaska's vast natural resources through the production and exportation of up to 20 million metric tons of LNG per year. Using clean, energy efficient and safe production methods and technologies, the project is predicted to generate billions of revenue for Alaska, as well as creating 9,000 – 15,000 jobs throughout design and construction, and 1,000 jobs for long-term operations.

NRC have been contracted to provide demolition and land clearing across the site. The work will take place over Q3 and Q4 of 2015.

## NRC UAE Awarded Al Hosn Gas Contract

Congratulations to our UAE team for securing a contract with Al Hosn Gas. The 9 month contract will provide Tier 1 OSR Services to support Al Hosn's drilling project on Hail 3 Island (Abu Dhabi). NRC will provide a dedicated team of 11 people - a Project Manager, 2 team leaders and responders, OSR equipment, and two landing crafts. The contract may be extended depending on the outcome of the drilling .

A special thanks goes to Georgios Pantazakos, David Nazha and all of the NRC UAE team for their hard work in developing the client relationship and securing the contract award. The project commenced in July.





## NRC Alaska's Unique Water Treatment Services

NRC Alaska's Non Hazardous Waste Treatment Facility in Anchorage was key to NRC winning a waste removal contract in 2015 for one of Alaska's major petroleum refineries. The facility, known as the Viking Facility, has proven valuable to many Alaskan customers in the past for its unique capabilities to manage non-hazardous waste products, recycling petroleum residues, and treating impacted wastewaters.

With no other permitted commercial Hazardous Waste Treatment and Disposal facilities in Alaska, all Hazardous Waste must be packaged and shipped a great distance to EPA permitted facilities in the lower 48 states. The Viking Facility fills a void, and although it cannot treat or dispose of EPA Regulated Waste, it can treat most other Non-Regulated waste streams up to and including benzene contaminated waters generated from the management of Petroleum Hydrocarbons.

In March 2015 NRC Alaska began management of the project, which

involves the transportation and disposal of wastewater generated from Alaska North Slope Crude Oil when it is refined into Ultra Low Sulfur Diesel and Jet Fuel. The NRC Alaska Team put together a comprehensive plan to treat the material in-state at our Viking Drive Treatment Facility rather than to package and transport this materials to facilities in the Lower 48 states. This effort provided the needed regulatory compliance and cost savings for our client.

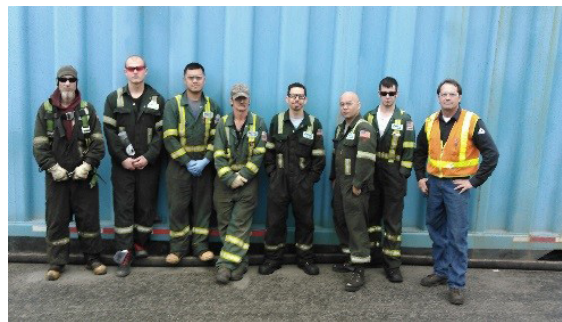
NRC Alaska specializes in providing innovative water treatment solutions customized to meet the requirements of specific client needs. NRC Alaska's Viking Facility offers treatment technologies that include but not limited to the following:

- Solids filtration utilizing bag filters, sand filters, geo-tubes and a high G force Centrifuge;
- Organics and metals adsorption utilizing mixed media beds including organoclay, activated carbon and impregnated zeolite;



- Inorganic metals chelation and precipitation processes
- Chemical injection for pH adjustment and flocculation utilizing state of the art industrial polymers and chemistry.

The two stage high speed Centrifuge installed in 2011 has been a welcome addition to the facility. With a processing capacity up to 1500 gallons/hour of water treatment flocculated solids, the unit handles solid loads up to 15% by weight in water. Since the units installation it has saved the facility substantial man hours of labor when compared to other dewatering techniques and produces a consistent landfill ready cake and readily managed liquid effluent.



## NRC Moves Up in Ranking to #46 in ENR's Top 200 Environmental Firms

NRC has been ranked #46 by Engineering News-Record (ENR) in the publication's annual list of The Top 200 Environmental Firms. This was a significant move from our ranking of #68 last year.





## NRC Attends Brownfield Conference in Chicago, Illinois

NRC's Bill Hunter and Mike Bliss attended the annual National Brownfields Training Conference in Chicago, Illinois from September 2nd through 4th. Shown left is NRC's exhibition booth displayed during the 'Brownfields 2015' conference held at the Hilton Chicago.

## SRS participates in Operation Vigilant Guard in Minnesota

Specialized Response Solutions, NRC's Special Operations Division, recently participated in Operation Vigilant Guard in Minnesota. This statewide exercise tested the State's overall response preparedness and the entire emergency response resources of the state. This included municipal, industrial, and contract responders, as well as elements of the Minnesota National Guard. The exercise addressed "real world" natural disaster events, and responses to large scale industrial accidents and fires. SRS's participation was sponsored by a large Class 1, rail carrier that operates in the State. This rail client is an important part of the response infrastructure,

and has purchased and staged several large fire trailers and other specialized response equipment designed and built by SRS.

One of the unique pieces of fire equipment used in the exercise was SRS's firefighting platform capable of being mobilized with a large truck or lifted by a large helicopter. The successful demonstration was beneficial in meeting the needs of our rail client and providing multiple delivery options that help comply with increasing regulations and, more importantly, provides additional firefighting protection for the local communities.



## Clean Sweep For Sureclean at Top Business Awards

Sureclean was presented with its fourth award win of the year after coming out top in the Inverness and Ross-shire Business of the Year category at the Highland Business Awards. This was awarded one day after winning the Green Award at the Northern Star Business Awards.

The annual Highland Business Awards recognise outstanding contributions and significant achievements across the Highlands and Islands and closes the annual Highland Business Week.

Sureclean was recognised in the 'Green Awards' category for its commitment to having an environmentally sustainable workplace and their role in contributing towards a "Zero Waste Scotland" along with its investment in renewable technologies at all of their facilities.

These wins also follow Sureclean's success two weeks ago at the Scottish Council for Development and Industry (SDCI) Awards, where the company took home the top awards in the Excellence in Environmental Sustainability and Excellence in People Development categories.





## NRC sign agreement with UAVRG

NRC has gone high tech with a new agreement with UAVRG, LLC of Cyprus, Texas that will provide unmanned drones, more aptly called Unmanned Aircraft Vehicles (UAV), to our arsenal of response capabilities. Whether used for oil slick detection and tracking to situational awareness, emergency management, or damage assessments; the UAV technology will provide high resolution infrared (IR) imaging and live video streams during oil spills or other emergency response events.

UAVRG, now part of NRC's Independent Contractor Network (ICN), will provide technical support to NRC with trained operators that will operate the aerial platforms during spill events. The UAV's and support equipment will be positioned in multiple regional areas throughout NRC's areas of operation ready for deployment and response within four hours of activation to emergencies.

The drone's high resolution imaging capability can measure and quantify oil spills, determine how the oil is moving in water, and stream live feed imagery to a Command Center during a response providing critical situational awareness for first responders during any NRC response incident.

UAVRG operates four sophisticated

unmanned aircraft models including their Precision Hawk Lancaster UAV; DJI Phantom 2 and Phantom 3 Professional rotary platforms; and the DJI Inspire.

Other practical uses of the UAVs will be to monitor pipelines and provide IR imaging to detect leaks that would otherwise not be visible. Specialized sensors attached to the drones can detect emissions of gas leaks. In non-emergencies, the aerial technology can also be used for analysis of an emergency situation during tabletop exercises; or in the planning, preparation, and development of emergency response plans. From aerial mapping, detection and monitoring, to asset security, the new UAV applications will be highly effective in future emergency responses.

Precision Hawk



DJI Phantom 3 Professional



DJI Inspire 1

## Sureclean Provides Services During Murchison Decommissioning Project

After a successful 20 months, Sureclean's Aker Solutions project on board the Murchison Platform came to an end with the completion of the first phase decommissioning of the platform. Congratulations to the Sureclean team who worked over 30,000 man hours with Zero LTI's and Zero equipment failures.

The final phase of the platform decommissioning will be carried out in-house by the platform operator, CNR. Following the success of our works on board during 2014/15, Sureclean have since been incorporated within CNR's in-house PFR (Preparation for Removal) team, in order to provide Cleaning Services during the final Engineering-down phase. This phase is to be carried out in advance of the designated Topside and Jacket Removal.

At present, Mathew Pirie (Sureclean Project Engineer), is based full-time within the CNR Office as Onshore Focal Point for the project, liaising with the client on a daily basis.

The next phase of offshore works for Sureclean will predominantly involve tank cleaning and water jetting, and started October 2015. The PFR phase will consist of Dayshift & Nightshift Sureclean squads, with planned completion of Engineering-Down during December 2015. The primary goal of this winter project will be to complete the work efficiently and safely.



### Erzincan Base New Depot Movement

NRC Turkey is proud to announce relocation of the Erzincan OSR base. The new base is located in the newly constructed Erzincan industrial zone conveniently located within the city limits and near the airport. The new base consists of 6993 square meter open area, 2771 square meter depot building, and 202 square meter administrative building, totalling 9966 square meters. The base is equipped with a natural gas heating system, fire alarm system, fire extinction system, automatic vehicle entrance doors, video surveillance system, garden irrigation system, proper fencing, and landscaping.

## NRC and AOST Launch Mediterranean Alliance

NRC International and the Malta-based oil and gas service company AOST Group have signed an agreement to provide a comprehensive oil spill response capability in Malta and the surrounding Mediterranean region. The joint initiative creates a far-reaching regional oil spill capability, which encompasses existing response resources in Malta, Greece, Tunisia, Egypt, Turkey, Gibraltar and Italy and combines the local presence and resources of NRC and AOST with the global capability and reach of NRC. NRC will place additional oil spill equipment in Malta to complement AOST resources in the region and the two companies will undergo cross training and joint exercises as part of the regional response alliance.

The alliance will allow the provision of a broad range of oil spill and related services to clients within the Mediterranean covering oil & gas exploration and production, marine transportation, oil distribution and marine salvage operations.

Senior Vice President of NRC, Neil Challis said "NRC has maintained a strong presence in the Mediterranean region since 2004 through oil spill services to the oil and gas sector in Turkey, Egypt, and Cyprus and through incident response. With increased focus on oil & gas reserves in the region, we have recognised the demand from our clients for greater local oil spill capability and we believe that this initiative will greatly assist our clients as they look to pro-actively manage their risk in the Mediterranean. This development with AOST will allow us to better support oil spill requirements and will also provide an opportunity for us to introduce our environmental, industrial cleaning and waste management services to oil and gas customers and service companies in the region."

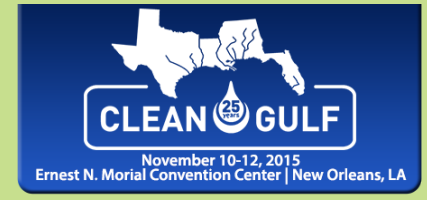


### NRC to attend Clean Gulf 2015

NRC is exhibiting at booth 426 at the upcoming Clean Gulf conference on November 10-12 in New Orleans, LA.

The conference, now in its 25th year, covers spill preparedness and response topics for the exploration & production, transportation, and storage of oil & hazardous materials.

Make sure to stop by our stand if you are heading along too.



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